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The news magazine of the International Union of Pure and Applied Chemistry (IUPAC)

Supplement

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Report of 31st General Assembly

1982

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INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY

CHEMISTRY INTERNATIONAL

SUPPLEMENT

MEMBERSHIP LISTS OF IUPAC BODIES

AND

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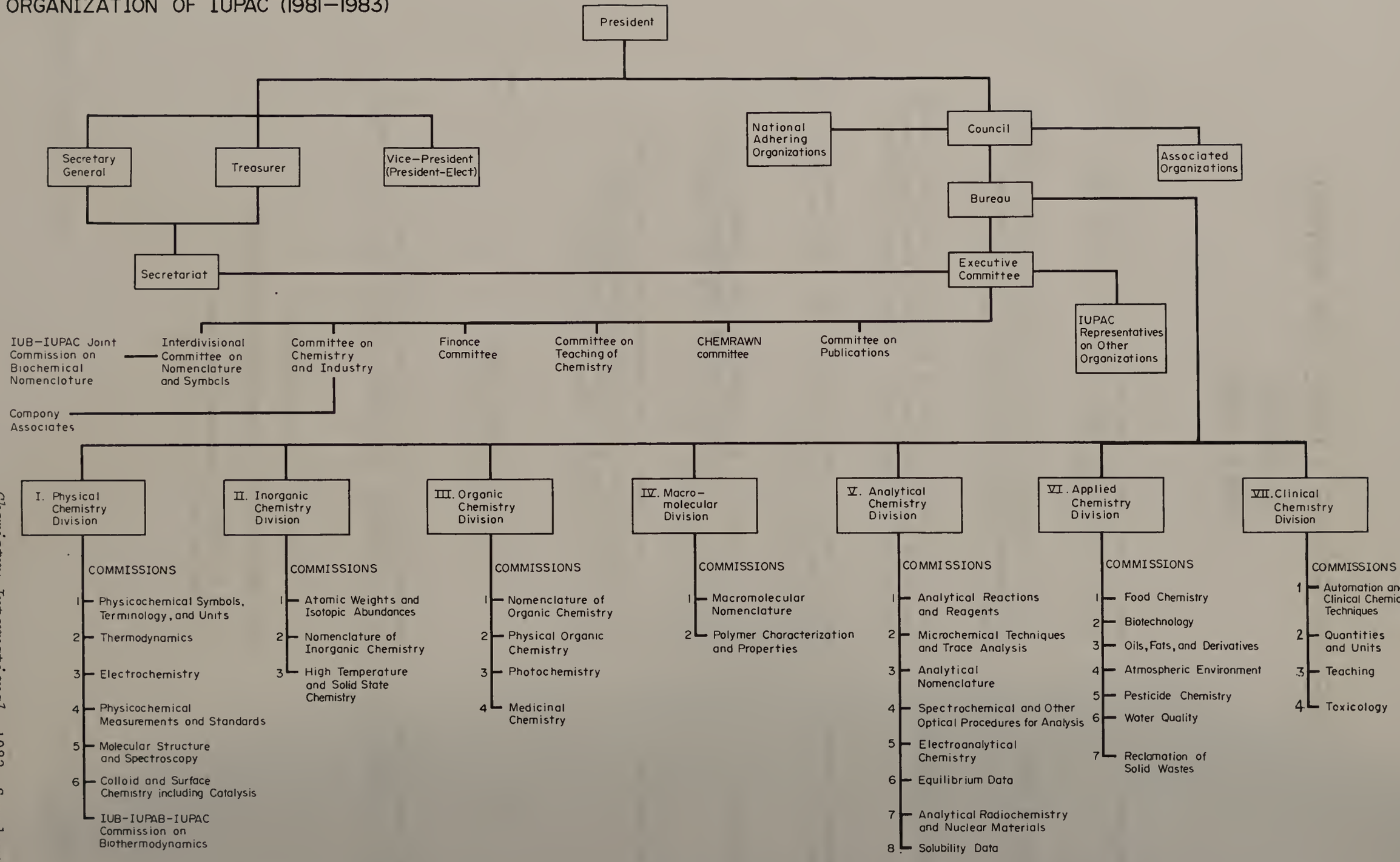

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Australia	Australian Academy of Science, POB 783, Canberra City, ACT 2601, Australia (TEL: +61 (62) 486011)
Austria	Verein Österreichischer Chemiker, Eschenbachgasse 9, A-1010 Wien, Austria (TEL: +43 (222) 574249)
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Brazil	Assoçiacão Brasileira de Química, Caixa Postal 550-CEP 20.043, Av. Rio Branco 156-s/907, Edif. Av. Central, Rio de Janeiro, Brazil (TEL: +55 (21) 242 9001)
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Canada	National Research Council of Canada, Montreal Road, Ottawa, Ontario K1A OR6, Canada (TEL: +1 (613) 993 2024)
China	Chinese Chemical Society, Chung Kuan Tsun, Beijing, China
	Chemical Society located in Taipei, China, POB 609, Taipei, Taiwan
Colombia	Ministerio de Minas y Petróleos, Sub-Dirección de Investigaciones Químicas del Instituto Nacional de Investigaciones Geologico-Mineras, Apartado Aéro 4865, Carrera 30, Numero 51-59, Bogotá, DE, Colombia (TEL: 443330)
Cuba	Academia de Ciencias de la República de Cuba, Capitolio Nacional, La Habana, Cuba
Czechoslovakia	Czechoslovak National Committee of Chemistry, Hradčanské náměstí 12, CS-118 29 Praha 1 - Hradčany, Czechoslovakia (TEL: +42 (2) 539074)
Denmark	Det Kongelige Danske Videnskabernes Selskab, Dantes Plads 5, DK-1556 København V, Denmark
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France	Comité National Français de la Chimie, 28 rue Saint-Dominique, F-75007 Paris Cédex 07, France (TEL: +33 (1) 551 1073)
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Hungary	Hungarian Academy of Sciences, POB 6, Münnich F.u. 7, H-1361 Budapest, Hungary (TEL: +36 (1) 383386)

India	Indian National Science Academy, Bahadur Shah Zafar Marg, New Delhi-110002, India (TEL: +91 (11) 276730)
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	Lonza AG
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For Standing Orders, see page 37/38

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ϕ For Standing Orders, see page 38/39

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WG 4 - Determination of Chlorinated Pesticides in Oils, Fats and Margarines
Part II : Wool Wax

G. Zwerenz (Coordinator); T. Asahara, J. Castang, J. Gracian Tous, T. Hashimoto, T. Nagai, W.D. Pocklington, J. Pokorný, A. Solère, K.A. Williams

WG 8 - Identification and Determination of Emulsifiers

H. Brüschweiler (Coordinator)

WG 9 - Publication of the 6th Edition of Methods - 1st Supplement

A. Hautfenne (Coordinator); M. Naudet, C. Paquot, W.D. Pocklington

WG 13 - Determination of Undesirable Plastic Contaminants in Oils and Fats

Ö. Levin (Coordinator); J. Castang, D. Firestone, É. Kurucz, J. Pokorný, K.A. Williams, J.P. Wolff

WG 3-78 - Determination of Polycyclic Aromatic Hydrocarbons in Oils and Fats

D. Firestone (Coordinator); G. Ostermann

WG 1-79 - Determination of Erythrodiol in Grapeseed Oils

J. Gracian Tous (Coordinator); J. Castang, E. Fedeli, D. Firestone, A. Karleskind, W.D. Pocklington, A. Solère, E. Tiscornia, K.A. Williams, J.P. Wolff

WG 2-79 - Total and Quantitative Determination of Sterols

M. Naudet (Coordinator); T. Asahara, J. Castang, A. Dieffenbacher, J. Dizier, T. Hashimoto, P.W. Hendrikse, A. Karleskind, T. Nagai, A. Solère, K.A. Williams, J.P. Wolff

WG 3-79 - Determination of Mineral Oil Residues in Oils and Fats
Part II : Quantitative Determination

H.J. Vos (Coordinator); J. Dizier, D. Firestone, P.W. Hendrikse, É. Kurucz, G. Ostermann, J. Pokorný, A. Visapää, K.A. Williams, J.P. Wolff, G. Zwerenz

WG 1-78 - Coordination of WG 1-80, 2-80, 3-80

Ö. Levin (Coordinator)

WG 1-80 - Extension of Methods of Analysis for Fats and Oils to Analysis of Phospholipids

R. Ohlson (Coordinator); H. Brüschweiler, P.W. Hendrikse, É. Kurucz, A.T. Møller, J. Pokorný, V.L. Rubajlo, A. Visapää, A.E. Waltking, K.A. Williams

WG 2-80 - Determination of Total Phospholipids and Insoluble Impurities

Ö. Levin (Coordinator); T. Asahara, J.L. Beare-Rogers, H. Brüschweiler, A. Dieffenbacher, T. Hashimoto, T. Nagai, M. Naudet, R. Ohlson, M. Pike, J. Pokorný, F.B. Shorland, H.J. Vos, A.E. Waltking, H. Wessels, K.A. Williams, J.P. Wolff

WG 3-80 - Qualitative and Quantitative Determination of Phospholipids and Determination of Phosphorus Content

J.L. Beare-Rogers (Coordinator); H. Brüschweiler, A. Dieffenbacher, J. Graille, P.W. Hendrikse, É. Kurucz, M. Naudet, W.D. Pocklington, J. Pokorný, A.E. Waltking, J.P. Wolff

WG 1-81 - Determination of Solvent Residues in Cakes

J.P. Wolff (Coordinator); J. Castang, D. Firestone, P.W. Hendrikse, É. Kurucz, Ö. Levin, W.D. Pocklington, J. Pokorný, A. Solère, K.A. Williams

WG 2-81 - Determination of Glyceridic Composition by GLC

W.D. Pocklington (Coordinator); H. Brüschweiler, A. Dieffenbacher, P.W. Hendrikse, B. Jacobsberg, A.T. Møller, R. Ohlson, M. Pike, H.J. Vos, H. Wessels, K.A. Williams, J.P. Wolff

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Prof. P. Métais (1975-1983)
Dr. R. Zender (1981-1985)

National Representatives

Dr. D.J. Campbell (1981-1983)
Canada
Prof. D. Stamm (1981-1983)
Federal Republic of Germany
Prof. B. Bousquet (1982-1983)
France
Dr. A. Desypris (1981-1983)
Greece
Prof. T. Horio (1981-1983)
Japan
Dr. O.P. Foss (1982-1983)
Norway
Prof. C.-H. de Verdier (1981-1983)
Sweden
Prof. P.D. Griffiths (1981-1983)
United Kingdom
Dr. C.A. Burtis (1981-1983)
United States of America

COMMISSION ON TEACHING (VII.3)
(Established 1967)

Titular Members

Dr. M.K. Schwartz (1975-1983)
Chairman
Dr. H.G.J. Worth (1979-1983)
Secretary
Dr. C.G. Fraser (1981-1985)
Dr. C.J. Porter (1975-1983)
Dr. O. Zinder (1979-1983)

Associate Members

Dr. N. de Cediel (1981-1985)
Dr. J.A. Corrêa (1977-1983)
Prof. B. Dastugue (1979-1983)
Prof. D. Dotchev (1979-1983)
Dr. M. Roth (1981-1985)
Prof. B. Štraus (1979-1983)
Dr. V.N. Titov (1981-1985)
Prof. R. Vihko (1981-1985)

National Representatives

Prof. M.M. Abdel Kader (1980-1983)
Arab Republic of Egypt
Dr. A. Gornall (1981-1983)
Canada
Prof. A.F. Delbrück (1981-1983)
Federal Republic of Germany
Prof. J. Agneray (1982-1983)
France
Prof. C.P. Tsiganos (1981-1983)
Greece
Prof. T. Kanno (1981-1983)
Japan
Dr. B. Christophersen (1981-1983)
Norway
Dr. B. Kagedal (1981-1983)
Sweden
Dr. H.A. Fritsche, Jr. (1981-1983)
United States of America

COMMISSION ON TOXICOLOGY (VII.4)
(Established 1973)

Titular Members

Dr. S.S. Brown (1973-1983)
Chairman
Prof. D.B. Tonks (1977-1985)
Vice-Chairman
Prof. J. Savory (1977-1985)
Secretary
Prof. Mirna Mikač-Dević (1981-1985)
Dr. M. Stoeppler (1979-1983)

Associate Members

Dr. K.S. Kasprzak (1981-1985)
Dr. K. Kuehn (1981-1985)
Prof. M.J.G. Mercier (1979-1983)
Dr. E. Nieboer (1981-1985)
Dr. S. Nomoto (1981-1985)
Prof. W.C. Purdy (1981-1985)
Dr. Y. Thomassen (1981-1985)

National Representatives

Dr. B.M. Kapur (1981-1983)
Canada
Prof. J. Büttner (1981-1983)
Federal Republic of Germany
Prof. C. Bohoun (1981-1983)
France
Prof. M. Marselos (1981-1983)
Greece
Dr. J. Borsy (1980-1983)
Hungary
Prof. T. Nambara (1980-1983)
Japan
Prof. E.G. McQueen (1981-1983)
New Zealand
Dr. L. Daae (1980-1983)
Norway
Prof. B. Sörbo (1980-1983)
Sweden
Dr. P.I. Jatlow (1981-1983)
United States of America

Representative of IUPHAR Section on Toxicology

Dr. G. Zbinden

SUBCOMMITTEE ON ENVIRONMENTAL AND OCCUPATIONAL TOXICOLOGY OF NICKEL

Prof. F.W. Sunderman, Jr.
Chairman

Members

Dr. A. Aitio
Mr. I. Andersen
Prof. M. Anke
Dr. S.S. Brown
Dr. A.G. Cecutti
Dr. M. Costa
Dr. A. Dornemann
Dr. Ph. Grandjean
Dr. A. Høgetveit
Dr. K.S Kasprzak
Dr. K. Kuehn
Dr. E. Mastromatteo
Dr. J. Meininger
Prof. Mirna Mikač-Dević
Dr. L.G. Morgan
Dr. E. Nieboer
Dr. S. Nomoto
Dr. T. Norseth
Dr. C. Onkelinx
Dr. B. Ribas
Mr. B.R. Roy
Dr. G. Rubanyi
Dr. E. Sabbioni
Dr. B. Sarkar
Mrs. Geraldine Savory
Prof. J. Savory
Dr. J.A.A. Sjöholm
Dr. D.H. Stedman
Dr. R.M. Stern
Dr. M. Stoeppler
Prof. D. Williams

SUBCOMMITTEE ON ENVIRONMENTAL AND OCCUPATIONAL TOXICOLOGY OF CADMIUM

Dr. M. Stoeppler
Chairman
Dr. H.T. Delves
Secretary

Members

Dr. J. Angerer
Prof. M. Anke
Prof. K. Aurandt
Mr. M. Bédard
Prof. H.L. Boiteau
Dr. M. Bomans
Prof. R. Bourdon
Dr. S.S. Brown
Dr. J.F. Cole
Dr. J. Cronin
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Dr. V. Ebbighausen
Dr. G.S. Fell
Dr. M. Fleischer
Prof. M. Geldmacher-v. Mallinckrodt
Prof. S. Gomišček
Dr. D. Gompertz
Dr. A. Harada
Dr. R.F.M. Herber
Prof. Y. Kodama
Prof. R. Lauwerys
Prof. P. Lous
Prof. G. Machata
Dr. G. Mattiello
Prof. Mirna Mikač-Dević
Mr. H. Muntau
Dr. H. Nomiyama
Dr. S. Nomoto
Prof. M. Piscator
Dr. J.M. Pujade-Renaud
Dr. R.D. Putnam
Prof. S. Rubel
Mr. K.H. Schaller
Prof. W. Steuer
Dr. C.D. Strehlow
Dr. K.S. Subramanian
Prof. D.B. Tonks
Prof. K. Tsuchiya
Dr. J. Verheyden
Prof. O. Vesterberg
Dr. V.B. Vouk
Mrs. R.J. Ward
Dr. E. Weisenberg
Mr. W.B. Yeoman
Dr. W.C.M. Zwennis

SUBCOMMITTEE ON TOXICOLOGY OF ALUMINIUM

Prof. J. Savory
Chairman

Members

Dr. A.C. Alfrey
Prof. P. Allain
Prof. H.A. Das
Dr. A.A. Dietz
Dr. G.S. Fell
Dr. J.A. Flendrig
Dr. H.J. Gitelman
Dr. S.W. King
Dr. D.R.C. McLachlan
Dr. E. Nieboer
Dr. M.K. Ward
Dr. M.R. Wills

SUBCOMMITTEE ON TOXICOLOGY OF SELENIUM

Dr. Y. Thomassen
Chairman

Members

Dr. J. Aaseth
Dr. D. Behne
Dr. O.A. Levander
Dr. Marleen Verlinden

STANDING ORDERS FROM EXECUTIVE COMMITTEE

CHEMRAWN COMMITTEE *

Composition and Terms of Office

(i) There shall be a standing CHEMRAWN Committee composed of a Chairman, a Secretary, and six other Members.

(ii) The President in consultation with the Executive Committee shall appoint Members. The CHEMRAWN Committee may propose names of persons suitably qualified for appointment.

(iii) The period of service of an ordinary Member shall be four years, renewable to a maximum of eight years.

(iv) The Membership shall be reviewed every two years by the incoming President in consultation with the Executive Committee.

(v) The President in consultation with the Executive Committee shall appoint the Chairman and the Secretary. The CHEMRAWN Committee may propose candidates.

(vi) The period of service of the Chairman and of the Secretary shall not exceed eight years. The sum of the years of service as an ordinary Member and as Chairman or Secretary shall not exceed ten years.

Terms of Reference

On behalf of the President and Executive Committee:

(i) to identify human needs amenable to solution through chemistry with particular attention to those areas of global or multinational interest,

(ii) to serve as an international body and forum for the gathering, discussion, advancement, and dissemination of chemical knowledge deemed useful for the improvement of man and his environment,

(iii) to serve as an international, nongovernmental source of advice for the benefit of governments and international agencies with respect to chemistry and its application to world needs,

and to be responsible for organizing IUPAC activity in these areas as approved by the President and Executive Committee.

* CHEMRAWN = Chemical Research Applied to World Needs

COMMITTEE ON CHEMISTRY AND INDUSTRY

Composition and Terms of Office

(i) There shall be a standing Committee on Chemistry and Industry composed of a Chairman, a Secretary, and a Member from each country or region having more than one Company Associate.

(ii) The President in consultation with the Executive Committee shall appoint the Chairman, the Secretary, and the Members. Candidates may be proposed by the Committee on Chemistry and Industry and by National Adhering Organizations having Company Associate programmes.

(iii) The period of service shall be four years, renewable for a further term of four years.

Terms of Reference

On behalf of the President and Executive Committee:

(i) To guide and inform Company Associates on IUPAC programmes and policies.

(ii) To establish important areas of chemical science in IUPAC related to ongoing industrial needs.

(iii) To put to industry enquiries on major chemical matters.

COMMITTEE ON PUBLICATIONS

Composition and Terms of Office

(i) There shall be a standing Committee on Publications composed of a Chairman, at least three and not more than six other Members, and the Scientific Editor of Pure and Applied Chemistry.

(ii) The President in consultation with the Executive Committee shall appoint Members. The Committee on Publications may propose names of persons suitably qualified for appointment.

(iii) The maximum period of service of ordinary Members shall be eight years.

(iv) The Membership shall be reviewed every two years by the incoming President in consultation with the Executive Committee.

(v) The President in consultation with the Executive Committee shall appoint the Chairman. The Committee on Publications may propose candidates.

(vi) The period of service of the Chairman shall not exceed eight years. The sum of years of service as an ordinary Member and as Chairman shall not exceed ten years.

Terms of Reference

(i) To advise the President and Executive Committee on all matters of publications including policy.

(ii) To make recommendations for decision by the President and/or Executive Committee.

COMMITTEE ON TEACHING OF CHEMISTRY

Composition and Terms of Office

(i) There shall be a standing Committee on Teaching of Chemistry composed of a Chairman, a Secretary, and six other Members.

(ii) The President in consultation with the Executive Committee shall appoint Members. The Committee on Teaching of Chemistry may propose names of persons suitably qualified for appointment.

(iii) The maximum period of service of ordinary Members shall be eight years.

(iv) The Membership shall be reviewed every two years by the incoming President in consultation with the Executive Committee.

(v) The President in consultation with the Executive Committee shall appoint the Chairman and the Secretary. The Committee on Teaching of Chemistry may propose candidates.

(vi) The period of service of the Chairman and of the Secretary shall not exceed eight years. The sum of the years of service as an ordinary Member and as Chairman or Secretary shall not exceed ten years.

Terms of Reference

(i) To advise the President and the Executive Committee on educational matters.

(ii) To coordinate the educational interests and activities of all IUPAC bodies.

(iii) To act as an informational and coordinating body for chemical education activities throughout the world and to establish a system of National Representatives as a channel of communication. To develop liaison with international organizations such as UNESCO and with national chemical societies or chemical education committees.

FINANCE COMMITTEE

Composition and Terms of Office

(i) There shall be a standing Finance Committee composed of five Members and a Chairman. In addition, the Treasurer shall be an ex officio Member but without voting power.

(ii) The President in consultation with the Executive Committee shall appoint Members. The Finance Committee may propose names of persons suitably qualified for appointment.

(iii) The maximum period of service of ordinary Members shall be eight years.

(iv) The Membership shall be reviewed every two years by the incoming President in consultation with the Executive Committee.

(v) The President in consultation with the Executive Committee shall appoint the Chairman. The Finance Committee may propose candidates.

(vi) The period of service of the Chairman shall not exceed eight years. The sum of the years of service as an ordinary Member and as Chairman shall not exceed ten years.

Terms of Reference

(i) To advise the President and the Executive Committee on financial matters.

(ii) To make recommendations for decision by the President and/or Executive Committee.

(iii) To review the IUPAC investment portfolio at least annually and make such changes as appear appropriate.

(iv) The Finance Committee shall not have executive functions except with respect to dealings in securities. The Finance Committee shall have executive authority with respect to selection, purchases, and sales of securities held by IUPAC, provided that the Treasurer and the IUPAC Banker concur with the decisions of the Finance Committee.

INTERDIVISIONAL COMMITTEE ON NOMENCLATURE AND SYMBOLS

Composition and Terms of Office

(i) There shall be a standing Interdivisional Committee on Nomenclature and Symbols (IDCNS), composed of a Chairman, a Secretary, the Scientific Editor of PAC, one Member and one Associate Member from each Division.

(ii) The President in consultation with the Executive Committee shall appoint the Members and Associate Members of the Divisions. IDCNS and the Division Presidents may propose names of persons suitably qualified for appointment.

(iii) The period of service of Members and Associate Members shall be four years, renewable for a further term of four years.

(iv) The President in consultation with the Executive Committee shall appoint the Chairman and the Secretary. IDCNS may propose candidates. The President in consultation with the Chairman may designate up to three additional experts at IUPAC expense for specific business at a meeting of IDCNS.

(v) The period of service of the Chairman and the Secretary shall be four years, renewable for a further term of four years. The sum of years as a Member or Associate Member and as Chairman or Secretary shall not exceed ten years.

(vi) The following organizations shall be invited to attend meetings of IDCNS:

Bureau International des Poids et Mesures
International Organization for Standardization
International Union of Biochemistry
International Union of Nutritional Science
International Union of Pure and Applied Biophysics
International Union of Pure and Applied Physics

Terms of Reference

(i) To be responsible for submission to the Bureau/Council, in accordance with Bylaw 2.11, for publication or otherwise, any IUPAC document concerned with nomenclature and symbols.

(ii) Before recommending any material for publication as an IUPAC document, to ensure that the fullest possible consultations have taken place, and the widest possible consensus has been reached among all Divisions, Commissions, and other bodies of the Union, and between IUPAC and other ICSU bodies, the international standardizing organizations, and Conférence Générale des Poids et Mesures (CGPM) and its Committees.

(iii) To ensure that any considered IUPAC view shall carry the fullest possible weight among other international organizations, all negotiations on matters concerned with nomenclature and symbols with other ICSU bodies, with the international standardizing organizations, and with CGPM and its Committees, shall be conducted through IDCNS, which shall advise the Executive Committee accordingly.

(iv) To be responsible, after consultation with all relevant bodies of IUPAC, for the official IUPAC comments on all documents on nomenclature and symbols sent to the Union for comment.

(v) To advise the President and Executive Committee on suitable persons for appointment as representatives of IUPAC on other bodies concerned with nomenclature and symbols.

IUB-IUPAC JOINT COMMISSION ON BIOCHEMICAL NOMENCLATURE

Composition and Terms of Office

(i) There shall be a standing IUB-IUPAC Joint Commission on Biochemical Nomenclature (JCBN) composed of eight regular Members, one of whom shall serve as Chairman and one as Secretary, and up to eight Associate Members.

(ii) The Chairman and Secretary shall each be appointed for a term of three years by the Presidents of the two Unions, subject to whatever ratification is imposed by Union Statutes and Bylaws. JCBN may propose names of persons suitably qualified for appointment.

(iii) Four of the regular Members shall be appointed by IUB and four by IUPAC. One of the four IUB regular Members shall be an Officer of the IUB Committee of Editors of Biochemical Journals (CEBJ). Four of the Associate Members shall be appointed by IUB and four by IUPAC.

(iv) The regular Members appointed by IUB shall also be Members of the Nomenclature Committee of IUB (NC-IUB).

(v) Candidates for membership may be proposed by the Commission and shall be appointed by the respective Unions.

(vi) The periods of service of regular Members and of Associate Members shall be in accordance with the Statutes and Bylaws of the appointing Union. The sum of the years of service as a regular Member and as Chairman or Secretary shall not exceed ten years.

Terms of Reference

(i) To consider the nomenclature and symbolic representation of natural products and related compounds including synthetic analogues, and, where appropriate, to make recommendations in conformity with those issued by other nomenclature Commissions of IUB and IUPAC.

(ii) Before recommending any material for publication as an IUB-IUPAC document, to ensure that the fullest possible consultations have taken place and the widest possible consensus has been reached with the appropriate bodies of the two Unions. For IUPAC, these are the Interdivisional Committee on Nomenclature and Symbols (IDCNS), or, through IDCNS, the appropriate divisional nomenclature Commissions. For IUB, these are NC-IUB and CEBJ.

(iii) Approval to publish any material as an IUB-IUPAC document is to be obtained, in the case of IUPAC, from IDCNS, and, in the case of IUB, from the Executive Committee of IUB.

(iv) The Commission shall normally hold an annual meeting, concurrently with NC-IUB, and with the approval of the President of IUPAC and the Executive Committee of IUB.

(v) Associate Members will receive all documents of the Commission and their opinion will be sought by correspondence. An Associate Member may attend any meeting of the Commission but his expenses will not be defrayed by the respective Executive Committee unless he has been invited as an observer under item (vi).

(vi) The Commission shall be entitled to invite observers from other Commissions and experts in special fields to attend the meeting. The respective Executive Committee shall be asked in advance to defray any expenses that would arise from such an invitation.

(vii) The continuation of JCBN will be reviewed by the Executive Committees of the two Unions in 1983.

IUB-IUPAB-IUPAC COMMISSION ON BIOTHERMODYNAMICS

Composition and Terms of Office

(i) There shall be a standing IUB-IUPAB-IUPAC Commission on Biothermodynamics composed of a Chairman, five other regular Members and up to six Associate Members.

(ii) Each Union, in consultation with the Commission, shall appoint two of the regular Members. The Commission shall appoint its Associate Members. The regular Members shall elect the Chairman from among themselves.

(iii) The initial period of appointment of regular Members shall be three years. Appointments shall be renewable for additional three-year terms up to a maximum of nine years.

(iv) The period of appointment of Associate Members shall be two years. Appointments of Associate Members shall be renewable for additional terms with no set limits.

Terms of Reference

(i) To advise the Unions on matters relating to the applications of thermodynamics in biology; in particular, to survey the status of research in this field, to promote the compilation and evaluation of relevant thermodynamic data and their correct presentation by thermodynamic functions, and to appraise the value of thermodynamic information for the development of biology.

(ii) To make recommendations on nomenclature in biothermodynamics and to formulate guidelines for the presentation of thermodynamic data relating to biological systems.

(iii) To initiate, sponsor, and organize meetings and conferences on biothermodynamic topics, both within the existing framework of the Union meetings and as independent activities. To act as a central source of information on meetings, workshops, and training courses dealing with research and education in biothermodynamics and to act as a means of coordinating and arranging such activities.

(iv) To encourage and participate actively in the preparation and publication of monographs in the field of biothermodynamics.

ALPHABETICAL INDEX TO MEMBERS OF IUPAC BODIES

(Where details of telephone are available, the plus sign should be substituted for 010 (the international code) followed by the country code, the area code in brackets, and the subscriber's number. The numbers in parentheses at the end of each entry indicate the pages on which the memberships of IUPAC bodies for each individual will be found.)

AASETH, Dr. J., Institute of Occupational Health, POB 8149, Gydas Vei 8, Oslo 1, Norway (TEL: +47 (2) 466850 TELEX:) (35)

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SUMMARY REPORT
OF THE 31st IUPAC GENERAL ASSEMBLY
25 Aug - 2 Sept 1981 in Leuven, Belgium

Report of President Zollinger on the state of the Union
Biennial Report of the Treasurer (1979&1980)
Comparative Balance Sheet, Income and Expenditure
Report of the 31st Meeting of Council

SUMMARY REPORTS OF IUPAC COMMISSIONS & COMMITTEES

Standing Committees

I. Physical Chemistry Division
II. Inorganic Chemistry Division
III. Organic Chemistry Division
IV. Macromolecular Division
V. Analytical Chemistry Division
VI. Applied Chemistry Division
VII. Clinical Chemistry Division

REPORT OF PRESIDENT ON STATE OF THE UNION

Copies of the following report by Prof. Zollinger were presented to members of the IUPAC Council prior to their meeting at the 31st General Assembly. Prof. Zollinger discussed highlights of the report in his impromptu address to the Council.

It is a statutory requirement, but also a noble tradition of our Union that the President reports on the state of the Union, on its activities and its future plans at each General Assembly.

In international activities our Union has a tradition of strict primacy of scientific and technological work as opposed to political considerations.

One consequence of this general policy is the absolute requirement that all IUPAC meetings be open to bona fide chemists from all countries, irrespective of the political relations of the governments involved.

Fortunately, this requirement is accepted by all countries as a condition for obtaining IUPAC sponsorship for a scientific meeting. As a consequence, chemists of countries which have no diplomatic relationship or are even hostile to each other, are able to meet at scientific conferences. This is a small, but effective contribution of IUPAC as a non-governmental institution to world peace.

Another confirmation of this primacy of science over politics was demonstrated two years ago when a diplomatic agreement could be reached whereby chemists from both Chinese Chemical Societies are now able to participate in IUPAC activities. It is a remarkable achievement since for the first time since the Second World War both groups of Chinese chemists are allowed to participate in cooperative scientific programmes. I am glad to state that in the last two years this cooperation of Chinese chemists in IUPAC bodies has begun very well, and that several IUPAC officers have had friendly contacts with officers of both Chinese Chemical Societies.

The progressive development of our Union was interrupted in one respect at the last General Assembly in 1979. Against the proposals of the Treasurer, supported by the Finance Committee and the Bureau, Council decided to reduce the budget for 1981 by $ 100'000 or more specifically, Council cut the total expenses for this General Assembly in Leuven by that amount. I can report to you that, thanks to the devoted work of our Secretariat in Oxford, in particular of Dr. M. Williams and Miss Ann Troughton, as well as the activities of our Belgian colleagues, Prof. G. Smets, our Past-President, Dr. H. Vankerckhoven and his staff, and the Belgian Government, we were able to reach the target imposed by Council. Therefore I should like to express my most sincere thanks to all these individuals and also to the Belgian Government. It was indeed hard work for them!

Through various observations and informal discussions with colleagues inside and outside IUPAC I came to the conclusion that the decision of Council in Davos was a sign of dissatisfaction concerning the activities of IUPAC, and is composed of at least three areas of discontent, namely:

1. inefficiency and too long duration of a relatively large number of projects,

2. insufficient use of our traditional means to solve new problems in a changing world,

3. the involvement of too small a circle of chemists in IUPAC work -- a reporter in Davos even called this circle a "charmed circle".

With respect to the first area of discontent, a critical assessment of the past and present work of all Divisions, Commissions and Committees as well as of their future plans was begun immediately after the General Assembly in Davos. It was made by myself together with the Vice President, Prof. S. Nagakura, and the Secretary General, Prof. G. Ourisson.

First, we read all annual reports of the Divisions, Commissions and Committees since 1975, all published reports since 1974 and the programme listings published in 1979 and 1981.

Furthermore, we obtained an evaluation of all published reports based on the needs of industrial chemists in 7 countries from our Committee on Chemistry and Industry (COCI).

In August 1980 the three Union Officers mentioned had separate meetings with each of the seven Division Presidents in order to discuss the first impressions of these studies.

The three Union Officers can not claim that they are professional experts in all fields of chemistry covered by the various bodies of IUPAC. The same is true for the opinions of industrial chemists which we received through COCI. Industrial chemists cover a very important aspect, on which was probably not considered in an appropriate way before IUPAC established COCI - but this aspect is not the only important one!

In all cases where the three Union Officers had very critical impressions and, where signs of lack of interest or negative opinions emanated from COCI, we consulted independent experts with an international reputation in the respective field of science and technology. We asked them for their confidential opinion, i.e. in exactly the same way as editors of first class scientific journals refer manuscripts to referees for comment.

In cases where such referees gave clear, positive assessments of the work of IUPAC bodies, we acted no further. We are glad to say that we learned that IUPAC's activities in many fields are highly regarded internationally. On the other hand, we also learned that some work holds little or no interest for chemists apart from members of the respective Commission and that other work of IUPAC is published late, often years after the time it was needed by the chemical community. We made similar observations with some of the projects mentioned in annual reports or in the list of current projects. Too many of these so-called current projects were begun 5 and more years in the past and finally disappeared without comment from the reports and lists.

What are the conclusions which my colleagues and I draw from this critical assessment of IUPAC's activities? We work on too many projects with insufficient intensity. It is better to concentrate on a smaller number of problems, and to work on them for a shorter period of time and in a qualitatively more profound way.

In the light of these conclusions, we will make proposals to Bureau and Council to dissolve some Commissions in their present form or to suspend their activities until a more precise programme of more constructive projects can be presented. I know that these proposals are not pleasant for the Commissions involved - but they are necessary in order to improve the image of IUPAC and to emphasize that the IUPAC label is still a label of scientific and technological quality.

I stress that it is not the financial situation of the Union, but the increase in quality and efficiency of all work carried out by IUPAC that is the primary goal. I am convinced, however, that in addition it will be easier for IUPAC to obtain more money from NAO's, from Company Associates and from international governmental organizations such as UNESCO if we can demonstrate convincingly that the efficiency of every dollar spent on behalf of IUPAC will be higher in the future than it was in the past.

I hope therefore that Bureau and Council will agree with our proposals in spite of the fact that they have unpleasant consequences for some Commissions.

The experience of the three Union Officers who made this critical assessment led us to the conclusion that it should be repeated in the future - not as intensively, but certainly systematically. The result is the proposal to change our Statutes and give the task to the Vice President. If he carries this out during his two years of office, he will become much better acquainted with the Union and this will help him in his duties during the following years as President.

With respect to the second area of discontent mentioned earlier, namely the insufficient involvement of our Union in the solution of problems which arise in a changing world, I am glad to say that, in my opinion, this is not justified in general, but only in part.

Some IUPAC bodies are indeed extremely active in tackling problems related specifically to the changes in the world we observe today refer in my report to two areas which I consider to be the most relevant.

Both relate to the question: "What is the contribution of chemistry to the future of man?"

An extremely important requirement for this question to be answered is knowledge concerning chemistry. Here, our Committee on Teaching of Chemistry has carried out excellent work in recent years under the clear and decisive guidance of its Chairman, Prof. C.N.R. Rao, and its Secretary, Prof. D.J. Waddington. The Committee realized its twofold task, namely firstly to provide help for teachers of chemistry in developing countries where knowledge of chemistry at the secondary school level is small or non-existent and where chemistry at University level has no tradition yet, and, secondly, to provide suggestions on the teaching of chemistry in industrialized countries where students at the secondary and tertiary level are very often critical of the subject. The symposia organized under the auspices of our Committee on Teaching of Chemistry, the regular news letter of the Committee (for which we gratefully acknowledge the financial support of UNESCO) and the book "Chemical Education in the Seventies" published by the Committee last year are examples of an efficient and highly desirable activity.

The other IUPAC body concerned with this extremely important area of activity is our CHEMRAWN Committee. CHEMRAWN - the acronym for chemical research applied to the worlds needs. Formed as a result of the initiative of the NAO of the United States the committee, since its formation at the General Assembly in Madrid (1975), has worked under the Chairmanship of Dr. B.W. Rossiter. CHEMRAWN has three intentions:

1. to identify human needs capable of satisfaction through chemistry with particular attention to needs of global or multinational size, which reflects the first step in science,

2. to provide a non-political, international forum for the collection, discussion, advancement, and dissemination of chemical knowledge deemed useful for the improvement of man and his environment,

3. to provide an international, non-governmental source of information for the benefit of research institutions, national government, and international agencies with respect to chemistry and world needs.

The first big success of CHEMRAWN was the World Conference on Renewable and Non-Renewable Organic Materials in Toronto 1978. Due to the initiative of Dr. Rossiter and the Chairman of the Canadian Organizing Committee, Dr. W.G. Schneider, it was possible to bring to the conference an impressive number of industrial and political leaders from some 60 countries. They learned what chemical research can do and can not do in the future to combat the coming shortage of organic raw materials. The conference was organized by IUPAC acting as a technical and not a political organization. This became evident from the fact that the papers presented and the majority of discussions were clearly based on the will really to solve problems by technical and scientific means; very little time was lost by political prestige debates.

The second CHEMRAWN Conference is now planned for Manila, Ph lippines, December 6-10, 1982 and will treat a topic which is already today a major world problem, namely our food supply. I will not report on the programme and goals of the conference nor on the other CHEMRAWN Conferences to be held in the following years. Council will be informed of the CHEMRAWN projects by Dr. Rossiter later today.

As President, I have to emphasize some general considerations:

1. CHEMRAWN II will be held in a developing country, a country which is even not a IUPAC member country. There are several reasons for this: I mention only that, first, insufficient food supply is above all a problem in developing countries. Second, such countries have large acreages of potentially rural land and the manpower for cultivation of such land.

2. Growing food with modern methods is, however, impossible without the use of various chemicals. Industrialized countries are therefore also involved in these problems.

Thus, I fully support the plans for this second CHEMRAWN conference and, in particular, the personal initiative and the work of Dr. Rossiter as Chairman of our CHEMRAWN Committee.

Finally, let me consider the third point of discontent - the opinion that IUPAC does not allow a larger number of chemists to participate in its activities.

Several years ago, Prof. G. Seaborg, the President of the American Chemical Society, proposed that an International Chemical Society be formed with individual membership for chemists from all countries.

What is the opinion of IUPAC? Council will have an opportunity to discuss the question at this meeting. The Executive Committee and Bureau came to the conclusion that the number of international governmental and non-governmental organizations is alreay too large, that there is too much overlap and that many organizations have little impact outside their own immediate circle.

On the other hand, we fully support the idea that as many individual chemists as possible should have the possibility to cooperate actively in IUPAC bodies.

We formed an ad hoc committee under the chairmanship of Dr. T.S. West President of the Analytical Chemistry Division. The Executive Committee approved the proposals of this committee in April 1981.

You have two summary recommendations in your files and Dr. West will enlarge on them at the Council meeting.

The proposals have two essential parts:

1. It is our intention to offer the possibility of individual membership, the so-called Affiliates.

2. We invite the President of Chemical Societies to form an informal group at our General Assemblies in order that their meeting can be coordinated with IUPAC activities, but they would still be independent of specific IUPAC statutes and bylaws.

We propose that the plan of Dr. West's ad hoc committee be implemented on a provisional basis immediately after Leuven if approved by Council.

I have not mentioned until now the proposal for a new dues structure of IUPAC, not because I considered it of secondary importance, but because it is my belief that our efforts to improve the efficiency of IUPAC work should not primarily be based on financial arguments, but on a concern for what I call the quality label of IUPAC.

The new dues structure proposal is the careful and devoted work of our Finance Committee chaired by Prof. A. Björkman and of our Treasurer, Dr. W. Graulich. I am convinced that it is a well balanced proposal which avoids cases of hardship as much as possible. It is also clear that we can not improve the quality of our work significantly and that we can not take over new future-oriented activities if our dues structure is not changed.

Our relationship with the International Council of Scientific Unions (ICSU) is important, as we are the largest of the 18 member unions.

Our representative in ICSU was and still is Prof. G. Smets. His work for ICSU was honored by his election to the Executive Committee of ICSU. However, Prof. Smets and I are dissatisfied by the fact the ICSU continues to distribute its subvention by allocating the same basic sum to each Union and, further, that it does not support very much new activities such as our CHEMRAWN programme on a preferential basis. Hard work is necessary to convince ICSU that our activity is worthy of support - not only with words, but by action!

One of IUPAC's strengths lies in the fact that we are a non-governmental organization and hence, fruitless political discussions are rare. I am also glad to state that in our various bodies members cooperate well, even if they come from countries which are, on the political scene, hostile to one another. They do indeed find a common interest and language, namely that of the chemist concerned with scientific or technical matters.

With respect to international governmental bodies which are concerned with chemistry, I came to the conclusion that our relations with these institutions have to be as close as possible, and that they must be improved. This is true for the World Health Organization in Geneva, but even more for UNESCO in Paris. There-fore I asked our member of Bureau Prof. A.A. Vlcek from Prague who is heavily involved in the relations of his country to UNESCO to become an adviser to IUPAC on UNESCO matters. More recently, I offered to become the IUPAC representative in the Council of the International Organization of Chemical Sciences in Development (IOCD), a new subsidiary organization of UNESCO working towards similar goals as our Committee on Teaching of Chemistry.

More activity in public relations for chemistry is a task of general importance for IUPAC. I am therefore very glad to see that our news journal, Chemistry International,has developed well by getting its own profile. I am therefore in favour of a continuation of this publication.

I close my report with my thanks to all members of IUPAC who worked for our Union in Commissions, Divisions or Committees. I am particularly grateful for the constructi cooperation from members of Bureau and Executive Committee, and even more for the help I received from my fellow Union officers Prof. Nagakura the Vice-President, Prof. Ourisson the Secretary General, and Dr. Graulich the Treasurer. Last, but not least I have realized even more than in previous years how much work is handled by our Secretariat in Oxford under the guidance of Dr. Williams. I thank him and his coworkers for their continuous efforts for the Union. Finally, I give my best wishes to Prof. Nagakura when he takes over Presidency tomorrow for the coming two years.

17 July 1981 (presented at Council Meeting 1 Sept, 1981)

Prof. Heinrich Zollinger
President

Biennial Report of the Treasurer 1979/1980

In Davos I was elected as your treasurer as from January 1st, 1980. This General Assembly showed the finances of our IUPAC to be in excellent condition. We have to express our special thanks to the former treasurer Prof. Horn and the Finance Committee with its Chairman Prof. Bjorkman and before him Dr. Barrett. But Davos also showed that the future would not be bright. The Council did not agree to the budget 1980/81, due to the fact that the expenses would be approx. 200.000 $ higher than the income. Therefore the Finance Committee got the order to lower the expenses for the general assembly-year 1981, this means especially for Leuven at about 100.000 $.

Therefore President Zollinger, Dr. Bjorkman, Prof. Horn and the treasurer met in Zurich to look first at the year 1980. By a rigorous shortening of the commission funds and by the efforts especially of the president to increase the number of officers who paid their money from other sources the figures for the 1980 budget became much lower than presented in Davos. With the help of past President Smets who worked hard and successfully the Finance Committee could also bring down the budget for Leuven.

In the report of the auditors on the examination of the financial statements as of December 31, 1979 and 1980 of IUPAC is shown that the actual results of this year have been much better than predicted in the budget.

In 1979 the main point was that the costs of 270.000 $ predicted for Davos came down to 253.688 $. The reason for this was mainly the excellent help of the "Schweizerische Gesellschaft fur Chemische Industrie" to whom we have to thank very much and the fact that fewer people of IUPAC than predicted took part. A special factor in the surplus of expenditure over income was lower than predicted in the budget has been excellent contract with Pergamon Press. Otherwise the loss of the test that IUPAC makes with Chemistry International would have been much heavier. This is also true of 1980 where the income from Pergamon exceeded 101.000 $. Finally the income from interest and dividends has been higher than foreseen. The real surplus of expenditure over income in 1979 was only 11.088,60 $.

For 1980 the Finance Committee predicted in the budget a surplus of income of 7.000 $ only. As the auditors report shows, we have in reality a surplus of about 82.000 $. As already mentioned the Pergamon Press brings a lot of money (39.000 & more than predicted) and the income of interest and dividends is about 36.000 $ higher than foreseen. As a whole further explanations can be seen from the details of the above mentioned booklet, but especially in one point. In February 1980 the Finance Committee in Zurich decided to switch the portfolio of IUPAC from shares to bonds, but especially to short term investments and this resulted in the increase of income from interest because of the high interest on US-Dollars which we got in 1980. And last but not least we realized by these purchase and sales profits on the book value as of the end of last year of 101.556 &. But it is quite clear that such an operation could be made only once. Now we have only very few shares in our portfolio.

But a big part of these short term investments will be needed for Leuven. So we have had in a

non-assembly year the surplus we need for the assembly year.

in 1980 we could overcome the difficulties because of the above mentioned reasons and could make the money for Leuven, where with the help of past president Prof. Smets we will be on the campus, and the cost "hopefully" will be the same as in Davos. After Leuven and the decision to be made there we will be able to provide a picture of the financial status for IUPAC for the future.

For 1979/80 we are obliged to UNESCO, from which IUPAC received via Jcsu assistance payments of 16.000 $ and 8.000 $ respectively. The fact that the administrative costs of the President, General Secretary and Treasurer are borne by their organizations - the ETH-Zurich, Comite National Francaise de la Chimie and Bayer AG respectively - deserves special recognition and we are greatly indebted to all of them. Special thanks are also due to Dr. M. Williams and Miss.A. Troughton for their excellent cooperation. Thanks also to Mr. Fehr of the Schweizerische Bankgesellschaft for his help and collaboration in the financial administration.

Also mentioned should be the good cooperation between President Zollinger, the Executive Committee, the office and last but not least the Finance Committee and Prof. Bjorkman.

29. June 1981 (presented at Council Meeting 1 Sept, 1981)

Dr. W. Graulich
Treasurer

Comparative Balance Sheet as of 31 December 1979 and 1980 (Expressed in US Dollars)

ASSETS	1979		1980	
Cash in Bank				
US Dollars	90'439.24		53'822.58	
Sterling	20'527.--		10'278.--	
Swiss Francs	2'840.--		7'889.--	
German Marks	12'710.--		14'696.--	
Short Term Deposits	100'000.--	226'516.24	310'000.--	396'685.58
Marketable Securities (at cost)		461'099.49		507'337.45
Transitory Assets		1'998.--		1'682.--
Subscriptions due				
National Organizations		10'520.--		26'807.--
Excess of Expenditure over Income		11'088.60		-.--
	US$	711'222.33	US$	932'512.03

LIABILITIES	1979	1980
Capital Account	689'014.83	677'926.23
Transitory Liabilities	16'107.--	58'637.--
Contracts Accounts	6'100.50	11'675.50
Profit on sold Securities	-.--	101'556.60
Excess of Income over Expenditure	-.--	82'716.70*
	US$ 711'222'33	US$ 932'512.03

* Of which US-$26'807 national subscriptions due 1978-1980 not yet paid.

Comparative Statement of General Income and Expenditure
Years ended 31 December 1979 and 1980
(Expressed in US Dollars)

INCOME	1979		1980	
Subscriptions National Organizations				
Current Year	214'529.--		222'804.--	
Outstanding	9'195.--	223'724.--	23'357.--	246'161.--
Income from Company Associates		64'574.05		66'712.93
Interest and Dividends earned		56'208.16		78'527.65
Other Income				
Transfer from Contracts Account		3'616.--		-.--
Exchange Differences		442.66		-.--
Subvention from UNESCO/ICSU		16'000.--		8'000.--
Last year's Provision for Committed Expenditure		42'579.--		4'000.--
Excess of Expenditure over Income		11'088.60		-.--
	US$	418'232.47	US$	403'401.58

EXPENDITURES	1979		1980	
Office Expenses				
Divisions and Stand. Committees	9'336.17		5'807.56	
IUPAC Officers	1'376.--		-.--	
Secretariat Oxford	77'037.--		98'919.--	
Audit, Bank Fees, other charges	19'757.11	107'506.28	16'731.41	121'457.97
Travel and Subsistance Allowances				
Meetings other than Gen. Assembly.	37'213.53		118'162.91	
General Assembly	233'688.50	270'902.03	1'688.43	119'831.34
Contribution to Symposia		-.--		2'500.--
Other Expenses				
Contribution to ICSU	5'913.--		6'123.--	
Free Info Bull., Comptes Rendus and Membership Lists	6'806.--	12'719.--	396.--	6'519.--
Transfer to Publication Account		23'105.16		10'186.07
Exchange Differences		-.--		4'190.50
Committed Expenditures		4'000.--		56'000.--
Excess of Income over Expenditure		-.--		82'716.70
	US$	418'232.47	US$	403'401.58

Comparative Statement of Publication Income and Expenditure
Years ended 31 December 1979 and 1980
(Expressed in US Dollars)

INCOME	1979		1980	
Publications				
Pergamon	50'889.--		107'864.55	
Butterworths	472.--		484.--	
Elsevier	130.--		158.--	
Secretariat	1'012.--		1'063.--	
Miscellaneous	22.87	52'525.87	16.04	109'585.59
Free Inf. Bulletins, Comptes Rendus and Membership Lists		6'806.--		396.--
Chemistry Int. Travel Fund		-.--		1'500.--
Last year's Provision for Committed Expenditure		17'449.--		10'643.--
Excess of Expenditure over Income		23'105.16		10'186.07
	US$	99'886.03	US$	132'310.66

EXPENDITURES	1979	1980
Scientific Editors	3'540.--	2'375.--
Info Officer, Asst. Secr. & Typist	45'645.--	69'422.--
Purchases Secretatiat from Pergamon	698.--	3'975.--
Inf. Bulletin	2'538.--	11'039.--
Comptes Rendus, Membership Lists	4'268.--	-.--
Shares of Secretariat Costs	29'986.--	39'726.--
Royalties Thermodynamic Tables Project	1'605.15	2'742.65
Chemistry Int. Travel Fund	-.--	2'126.--
Miscellaneous Expenditure	962.88	905.01
Committed Expenditure	10'643.--	-.--
	US$ 99'886.03	US$ 132'310.66

Comparative Statement of Contracts Income and Expenditure
Years ended 31 December 1979 and 1980
(Expressed in US Dollars)

INCOME	1979	1980
UNESCO Contracts	7'500.--	12'200.--
Balance from last year	5'481.50	6'100.50
	US$12'981.50	US$ 18'300.50

EXPENDITURE	1979	1980
UNESCO Contracts	3'265.--	6'625.--
Transfer to General Purpose a/c	3'616.--	-.--
Balance to next year	6'100.50	11'675.50
	12'981.50	18'300.50

MINUTES OF 31ST MEETING OF COUNCIL

1st-2nd September 1981

Present: Prof. H. Zollinger (President, in the chair), Members of Bureau, Delegates of National Adhering Organizations, Observers from Associated Organizations.

ANNOUNCEMENT OF NOMINATIONS FOR OFFICERS AND BUREAU MEMBERS

The papers distributed before the meeting included the nominations received by the statutory deadline, together with biographical notes on each candidate, for the Office of Vice-President and for vacancies amongst the Elected Members of the Bureau. Prof. Zollinger announced the withdrawal for 1981 of the nomination by FRG of Prof. H. Gg. Wagner as a candidate for Vice-President of the Union. Dr. W.G. Schneider would therefore be unopposed.

On the recommendation of the Bureau it was resolved unanimously that:

(i) there should be 12 Elected Members of the Bureau for the period 1981-3.

(ii) the Vice-President, the Secretary General, and Dr. W. Spindel (non-voting Secretary of the US Delegation) should act as tellers during all voting.

Council noted that, in accordance with Bylaw 2.222, the Bureau had made recommendations for filling the 6 vacancies as Elected Members of the Bureau. These recommendations were not binding on Council.

STATUTORY REPORT OF PRESIDENT ON STATE OF UNION

Using a diagrammatic approach Prof. Zollinger commented on various aspects of his precirculated formal report and added some more recent information:

- reaffirming the policy for all IUPAC-sponsored meetings to be open to bona fide chemists from throughout the world

- referring to the decision of Council at Davos to reduce substantially the budget for Leuven, which had stimulated a critical assessment of IUPAC activities

- stressing the primary importance in the present world of the work of the Committee on

Teaching of Chemistry and of the CHEMRAWN Committee

- mentioning the progress towards involvement of chemists on an individual basis in the Union

BIENNIAL REPORT OF TREASURER

The report of the Treasurer and the audited accounts for 1979-80 had been circulated before the meeting. A deficit of US-$11 089 in 1979 had been more than balanced by an excess of income over expenditure in 1980 of US-$82 717, the financial outcome being much better than predicted at Davos.

The financial status (as at 81-08-21) showed a cash position at the IUPAC Banker of about US-$64 000 and US-$220 000 in short-term investments. However, a diagrammatic presentation by Dr. W. Graulich, summarizing the changes in main income and expenditure items and in the assets over the last ten years, drew attention to the serious overall financial situation of the Union.

There was considerable discussion about the cost to IUPAC and effectiveness of Chemistry International. Council was reminded that the three-year trial period for the news magazine would be reviewed by mid-1982. Meanwhile, the Secretary General urged all persons interested in or having opinions on CI to communicate their views to the editor, the Chairman of the Publications Committee, or the Officers of the Union.

On the recommendation of the President, Council resolved unanimously that the audited accounts for 1979-80 should be accepted and Neutra Treuhand AG should be reappointed as auditor for IUPAC for the biennium 1981-2.

REPORT OF FINANCE COMMITTEE

A short written report from the Chairman of the Finance Committee, Prof. A. Bjorkman, was received by Council without discussion.

TENTATIVE BUDGETS FOR 1982 AND 1983

Tentative budgets (as at 81.08.29), prepared by the Finance Committee at Leuven and examined by the Executive Committee and Bureau, were tabled before Council.

Prof. Bjorkman pointed out the suggested level of formal dues for 1982 (US-$400 000). This constituted an attempt via the proposed new dues scheme to get back in part to the pre-1979 level of IUPAC activity. It was also necessary to have a surplus of US-$50 000 in 1982 to help finance the General Assembly in 1983. Allowance for a deficit guarantee for CHEMRAWN II - a personal initiative of Prof. Zollinger to show the confidence of the Union - meant US-$ 50 000 less money for Divisional activities in 1982. Even higher dues were envisaged for 1983 to help raise the money for the General Assembly at Lyngby (US-$47 000 more than Leuven simply because of inflation) and further close the gap to pre-1979. The deficit of US-$14 000 presently foreseen for 1982-3 was judged to be within the current uncertainties of the 1982 and 1983 budgets.

Data was also presented by Prof. Bjorkman, which showed that the supplementary assets of the Union (US-$366 000 at the end of 1979) were now considerably reduced and would be exhausted within the next two years. The expected financial assistance in introducing the new dues scheme would therefore not now be available: nobody could have anticipated the continuing high value of the US-dollar and its effect on the IUPAC portfolio.

An analysis of the major items of IUPAC expenditure indicated that:

(i) the costs of the IUPAC Secretariat might be reduced significantly by transferring some work to the Divisions (i.e. a move towards more "non-budget" income);

(ii) there was no hope of any further major reductions in expenditure on the General Assembly (university campus accommodation and reduced-cost travel were now normal practice), while a return to pre-1979 level of activity was suggested/promised for a non-Assembly year;

(iii) CI was expected to consume a large amount of money in 1981 (approximately US-$70 000).

In the eneral discussion which followed, it was explained that IUPAC Secretariat costs were apportioned between publication and non-publication operations on the basis of staff salaries. The Israeli Delegation emphasized the small growth envisaged in publications income during 1982-3, while the UK Delegation observed that the provision for CI in 1983 might not be required. Prof. Ourisson replied that a least the slow growth in subscribers to Pure and Applied Chemistry was against the market trend for journals. Capacity for further growth existed, especially now that PAC was much improved in quality and rapidity: the Secretaty General invited all present to press for new subscriptions to and wider reading of the IUPAC journal.

Concern was expressed by the Delegations from Australia, UK and USA at the deficit guarantee for CHEMRAWN II, its size in relation to the total money scheduled for IUPAC activities in 1982, and extrapolation of the financial difficulties o further CHEMRAWN Conferences in later years. Dr. B.W. Rossiter indicated that the organizers might not need to call on the money, but in any case hoped to repay the Union if the meeting was in financial surplus. Should the money indeed remain unused, Prof. Zollinger said it could certain y be made available for other IUPAC (Divisional) activities.

Prof. Zollinger called for a formal vote and Council resolved unanimously to accept the tentative budgets for 1982 and 1983.

PROPOSED NEW DUES STRUCTURE AND FIXING ANNUAL DUES FOR 1982 AND 1983

The proposed income plan and modified dues structure for IUPAC had been circulated to NAOs by Prof. Zollinger. A proposals summary document, finalized by the Bureau at Leuven contained the principles in Part I and calculation of a budgetted income level in Part II.

In a diagrammatic review, Prof. Bjorkman pointed to the main weaknesses of the 1971 (Washington) dues structure: no precise rule for the use of CA income and vulnerability to inflation. The 1981 proposals constituted an adjustment, in which NAO contributions were expected to be at least minimum dues and flexibility downwards was limited. The guiding CT figures were tentative and subject to agreed adjustments; category allocation was also open for correction, based on individual NAO conditions. In addition, the 1981 proposals paid particular attention to high CT figures by introducing more categories, thereby avoiding that the largest countries carried too great a proportion of the total IUPAC expenses. Moreover, regular biennial increases of formal dues would be exercised as long as costs increased. There was now only one possibility for further cost reduction, namely less IUPAC activities. It was emphasized that CT lists and sliding scales were subject in principle to changes every biennium.

Also,Prof. Bjorkman referred briefly to a proposal from UK of a mathematical formula for calculating national subscription, which constituted a refinement of the new dues structure. The Finance Committee was now convinced that this refinement merited more detailed evaluation after Leuven and might lead to a recommendation at Lyngby.

Before opening the meeting for discussion, Prof. Zollinger said if there was a good response from NAOs to the new dues structure, the Bureau might be able to lift at Lyngby the restriction introduced at Leuven only to approve nominations to a maximum of eight Members of Division Committees and of six Titular Members of Commissions. Should Council reject the proposals, a reserve plan would be introduced on the second day of the meeting, but inevitably involving serious reductions to the existing 1982-3 budget estimates.

The Argentinian Delegation commented that the proposals would make it more difficult for Latin-American countries - already poorly represented at Leuven - to join or remain members of IUPAC. In future, Observer Country status might be the only realistic possibility. He advocated "1.5" instead of "2.0" as the ratio of dues between the lower membership categories, but Prof. Bjorkman said the effect of such a change would drastically reduce the total NAO income because the ratio decreased towards the higher categories. Argentina was advised to contest its tentative CT figure and/or to develop a case to move one category lower.

Italy wondered if the involvement of national and multinational companies in CT could be apportioned in some way. Prof. Bjorkman felt this would be almost impossible in practice,but

it was for the NAO to provide data for consideration by the Category Subcommittee.

Spain reaffirmed its opposition to CT as the sole criterion for national dues. The Spanish dues were derived from government, with virtually no contribution from industry and especially from multinationals. In addition, the possibility to pay the dues partly in national currency would not help countries with few Titular Members. The UK Delegation mentioned that multinational subsidiary companies were increasingly under control on a national basis, and it was up to each NAO to press such subsidiaries for financial help.

Brazil enquired how the relatively few chemists in Associacao Brasileira de Quimica could hope to meet the increased dues for their country. Prof. OUrisson advised that chemical industry should be approached and convinced of the value of supporting IUPAC activities. Canada suggested that processing of "chemicals" and related matter, if covered by the definition of CT, might be a more effective means for some countries to raise extra money.

Austria asked if other criteria than CT had been considered as the basis for dues, such as the membership size of the national chemical society. Prof. Zollinger replied that alternatives had been look at in 1971 and for the modified scheme, but CT was again concluded to be the best criterion. It was difficult to equate chemistry qualifications in various countries and entry conditions differed considerably between national chemical societies. The President invited NAOs to submit suggestions in writing of improvements to the new dues scheme, but they must be operational and based on data which were generally accessible.

The FRG Delegation was satisfied that the Finance Committee had already given full consideration to the whole matter, and most countries seemed to be at the expected category level using the tentative CT table.

No delegation expressed a wish for a separate vote on each proposal in the summary document, and Council resolved (106 in favour, 28 against) to accept the proposals en bloc.

APPLICATIONS FOR MEMBERSHIP OF IUPAC

On the recommendation of the Bureau, Council resolved unanimously that the application for membership of the Union from the Malaysian Institute of Chemistry should be accepted.

The President reported that the Secretary General and himself had recently taken several initiatives, which they hoped would result in applications from a number of countries in Africa and Asia for full membership or Observer Country status of IUPAC.

APPLICATIONS FOR ASSOCIATED ORGANIZATION STATUS

On the recommendation of the Bureau, Council resolved unanimously that:

(i) applications for AO status of the Union from the European Federation of Biotechnology and the Federation of Asian Chemical Societies should be accepted;

(ii) sixteen independent bodies already enjoying AO status should be allowed to continue in that capacity for the next biennium, namely

Association of Official Analytical Chemists
European Federation of Chemical Engineering
European Photochemistry Association
Federation of European Chemical Societies
Groupement pour l'Avancement des Methodes Spectroscopiques et Physico-chimiques d'Analyse
International Association for Cereal Chemistry
International Association of Geochemistry and Cosmochemistry
International Association on Water Pollution Research
International Committee for Science of Photography
International Confederation for Thermal Analysis
International Conferences on Coordination Chemistry
International Conferences on Organometallic Chemistry
International Federation of Clinical Chemistry
International Society of Heterocyclic Chemistry

International Carbohydrate Organization (formerly International Steering Committee for Carbohydrate Chemistry)
Union of Arab Chemists

(iii) a decision regarding continuation of eight independent bodies should be deferred to the Spring 1982 meeting of the Executive Committee in order to allow more time to obtain statements on their current activities, namely

Association of Editors of European Chemistry Journals
International Association for Advancement of High Pressure Science and Technology
International Commission on Applications of the Mossbauer Effect
International Committee on Rheology
International Congress of Catalysis
International Organization of Crystal Growth
International Society of Electrochemistry
International Society of Magnetic Resonance

The Israeli Delegation was advised that activity statements from the sixteen existing AOs had been examined by the Secretary General and considered by the Bureau at Leuven. Any NAO interested in seeing the statements should contact the IUPAC Secretariat.

The President reported briefly on an informal lunch meeting at Leuven (81.08.27) between representatives of eight existing and the two applicant AOs and the Officers/Division Presidents of the Union. Discussions on how to improve collaboration between IUPAC and its AOs had been sufficiently successful to warrant holding a similar meeting at Lyngby.

REPORTS OF DIVISION PRESIDENTS

Prof. Zollinger referred to the precirculated reports by the Division Presidents of activities since the 30th General Assembly, and asked for Council to be informed of further progress made at Leuven. In the case of the Organic, Macromolecular, Applied and Clinical Chemistry Divisions, the remarks were made by the Division Vice-Presidents.

Prof.N. Sheppard said that fourteen reports from Commissions of the Physical Chemistry Division had been completed frior to or at Leuven. Sixteen more were anticipated during the biennium. There was much interest outside IUPAC in the series Recommended Methods for Realization of Physicochemical Properties and it was hoped to combine the various sections eventually into a compendium. Critical assessment by the Officers of the Union of the Commission on Physicochemical Measurements and Standards had stimulated the Division Committee to review carefully the objectives and personnel of that Commission. Proposals were still being drawn up for a specific programme of work and possible membership of a Commission on Chemical Kinetics. The Council Observer from the European Federation of Chemical Engineering expressed interest in the suggestion for IUPAC to take an initiative in the relevant applied physical chemistry of chemical engineering, and Prof. Sheppard thought that mass transport problems might be a suitable starting point.

According to Prof. N.N. Greenwood, the period since his precirculated report had been particularly fruitful in the Inorganic Chemistry Division. The major review on isotopic abundancies of the elements had just been finalized. Changes in atomic weight values were recommended for hydrogen, silver and lutetium, and a completed table of atomic weights to five significant figures should be of value to the majority of practising chemists. Revision of the 1971 edition of Nomenclature of Inorganic Chemistry (the Red Book) was progressing well. Drafts of eight of the ten chapters of Part I had been reviewed at Leuven and several chapters of Part II had been completed.

Prof. J. Mathieu presented a diagrammatic survey of the work of the Organic Chemistry Division, drawing attention to the various working parties, documents drafted and those under publication. The Division Committee was helping to propose a reorientation of objectives and projects for medicinal chemistry. The various established series of IUPAC-sponsored symposia had been continued, some new themes initiated and others suggested.

On behalf of the Macromolecular Division, Prof. C.H. Bamford indicated that the document on principles and format of copolymer nomenclature had been agreed and would now be prepared for publication. Exploratory meetings at Leuven with some Commissions of the Physical

Chemistry Division would be helpful in drafting physicochemical terms and definitions for solid, liquid, and dissolved polymers.

A Programme on polyelectrolytes had been started and a proposal discussed to collect solubility data on polymers. Prof. Zollinger mentioned the unique way of working of the Division: few Commissions, but many working parties. A summary document on these procedures had been distributed for consideration by the other Divisions of the Union.

Dr. T.S. West announced that over twenty Commission reports were completed at the present General Assembly and twelve others of the Analytical Chemistry Division were terminated as a result of reassessing priorities. The interCommission project on assessment of available techniques for determination of selected trace elements in natural waters should eventually produce an authoritative and critical statement of the possibilities for solution of such problems. It had been agreed to continue the joint activity with the Clinical and Applied Chemistry Divisions on harmonization of collaborative analytical studies, following the recent symposium at Helsinki with participation from several AOs and other international organizations.

While the Applied Chemistry Division welcomed the IUPAC Officers' critical assessment in principle and accepted the scientific content in part, Dr. H. Frehse stressed that disagreement had been expressed on some aspects. In any case, the assessment had become available too late for replies to be made by the three heavily criticised Commissions prior to the General Assembly, leading to widespread discontent within the Division. After reviewing the work programmes of the four Commissions expected to continue in full activity, twelve projects were dropped and fifteen terminated (40% reduction). There was concern at the need to publish Commission reports in PAC rather than in outside specialist journals. Reproduction from PAC was unacceptable for many such journals. The Israeli Delegation drew attention to the similarity of some projects of the Food Chemistry Commission and those of Commissions in the Analytical Chemistry Division: overlap of effort should be avoided through collaboration.

In the Clinical Chemistry Division, the Commission on Toxicology had decided to concentrate on metal toxicity and the Cholinesterases Subcommittee had therefore been abolished. Prof. F.W. Sunderman, Jr. said that reference methods were being developed and interlaboratory collaborative trials organized to harmonize discordant results in biological monitoring of human exposure to nickel, cadmium, aluminium, etc.

On the recommendation of the Bureau, Council resolved unanimously that:

(i) the revised rules of the Clinical Chemistry Division should be approved;

(ii) two amendments to the rules of the Inorganic Chemistry Division should be accepted;

(iii) one amendment to the rules of the Macromolecular Division should be accepted;

(iv) the submitted rules of the Applied Chemistry Division should be withdrawn for revision and extension.

REPORT OF COMMITTEE ON PUBLICATIONS

Dr. D.P. Den Os presented some supplementary remarks to his precirculated report, taking into account discussions at the Publications Committee meeting in Leuven. Notwithstanding the doubling of royalties over the past few years, there was grave concern that important reports in PAC and books originating from the voluntary work of Commissions were not being disseminated widely enough to chemists throughout the world. The changing habits of individual chemists not to buy books nor to subscribe to journals, in addition to severe restraints on library budgets, constituted formidable barriers to improved dissemination. Various solutions would be explored with the Union's publisher, including its price setting policy. However, the continuous support of all members of IUPAC bodies in propagating the publications was vital. The potential introduction of an Affiliate membership scheme also offered an opportunity to improve the distribution of publications, and the Publications Committee wished to be involved in the developments. An experiment was to be tried in commissioning for PAC alimited number of review articles related to IUPAC-sponsored symposia or other important themes: help in selecting topics was invited.

Prof. Ourisson stressed that PAC had the best list of contributors in the world (plenary

symposia lecturers) and achieved rapid publication in several cases: everyone should actively promote the journal. Prof. Zollinger outlined a new mechanism to be tried over the next two years for publication of official recommendations on nomenclature and symbols. Wider efforts were to be made to solicit comments on provisional recommendations prior to publication one in PAC.

REPORT OF CHEMRAWN COMMITTEE

Dr. Rossiter was pleased to the active involvement of some national representatives in the CHEMRAWN Committee deliberations during the General Assembly. It had been decided definitely to proceed with CHEMRAWN III (2nd World Conference on Future Sources of Organic Raw Materials, in Europe/1984) and IV (Chemistry and Resources of the Oceans, in USA/1984). Some concern had been raised by COCI at the suggested title - Chemical Basis of Carcinogenesis - for CHEMRAWN V and further study was now required. All present were urged to help distribute the latest brochure for CHEMRAWN II (Chemistry and World Food Supplies - New Frontiers, in Manila/1982) in their home countries to scientists and decision makers and to make efforts for additional funding to support participation from developing countries. Dr. Rossiter re-emphasized that CHEMRAWN should concentrate only on major world needs and maintain the highest standards.

The question was raised of whether two major CHEMRAWN meetings in 1984 was over ambitious. Prof. Zollinger confirmed that IUPAC sponsorship was established in the same way as for other international symposia, namely via the official advance information questionnaire procedure and without involvement of Council. Denmark was advised that ICSU/UNESCO were being pressed heavily to provide financial support for CHEMRAWN II, and Dr. Rossiter said efforts were being made to obtain some free travel on national airlines. Simple but appealing titles, such as Chemistry against Hunger, Chemistry against Cancer, were advocated for CHEMRAWN conferences by the UK Delegation. The Secretary General of the newly accepted AO, Federation of Asian Chemical Societies, welcomed the decision to locate CHEMRAWN II in Asia and made a plea to keep all future registration fees low to encourage involvement of younger chemists, bearing in mind the inevitable high travel costs.

PROPOSED CHANGES TO STATUTES AND BYLAWS

(i) On the recommendation of the Bureau, Council resolved (138 in favour, 0 against) that the following wording should be added to the second sentence of the first paragraph by Bylaw 2.222 (page 9, line 27):

> It has the right to make additional nominations for which information shall be provided, but for which in exceptional circumstances the restriction in Statute 7.2 of no Adhering Organization having more than one Elected Member on the Bureau shall not apply.

(ii) There was considerable discussion of the recommendation by the Bureau to reword Statute 3.3, following acceptance by Council at Davos, that a country may apply to stay only one category lower than required by its chemical turnover.

The Delegations from Argentina, Poland, Spain and USSR spoke against the proposed change, especially the statutory use of chemical turnover, and suggesting that it be used only as a guideline for the next two years. The President and Secretary General re-emphasized the flexibility of the rewording, which allowed countries the possibilities to correct a recommended CT figure or to move one category lower. The Swedish Delegation was reasured there was no restriction against a country moving to a category higher than equivalent to its CT, and Israel suggested this should be made clear in the rewording.

The FRG Delegation announced that an evaluation of the CT table included with the new dues structure indicated 10 NAOs paying about 75% of the total dues and having about 50 votes in Council, whereas 34 NAOs paid 25% and had 96 votes, The new structure was clearly in favour of the interests of the smaller countries, some of which still tried to escape their financial obligations to the Union.

The Delegations from France, FRG and UK pointed out thet the disagreements earlier in the meeting about the new dues structure were being reopened, and a vote was taken on the Bureau recommendation. Although the recommendation was approved by

Council (106 in favour, 36 against), no change could be made to Statute 3.3 because it did not receive the support of two-thirds of the total possible votes (Statute 14.3 was interpreted to mean "total possible number of votes" rather than "total number of votes present"; 36 delegations were present at this particular time with 156 votes, but 41 possible delegations with 170 possible votes, i.e. 106/170 = 62.4%). Prof. Zollinger noted there was still a requirement to change Statute 3.3 in respect of the new dues structure adopted by Council at Leuven.

(iii) Subject to a proviso suggested by Netherlands and supported by Canada that the evaluation should be available in a General Assembly year to Division Committees/ Commissions three months prior to the Council meeting, and substitution of "critical assessment" for "evaluation", Council resolved unanimously to adopt the following new Statute 6.33:

> The Vice-President shall submit to the Bureau annually an evaluation of the programmes and the projects of all IUPAC bodies.

The proviso could not be incorporated into the new statute because prior notification of ten months was needed. It could probably be covered by a standing order from the Executive Committee to the Executive Secretary in respect of the 1983 critical sssessment.

(iv) Concerning definition of "country" in Statute 3.1 and the directive from Council at Davos for action, the Bureau had suggested a possible additional paragraph. The USSR Delegation felt that the addition was based on a very exceptional situation which had been solved satisfactorily at Davos by a Presidential ruling, so there was no need to introduce any statutory change. No change to Statute 3.1 was approved by Council because it did not receive the support of two-thirds of the total possible votes (82 in favour, 50 against).

MAXIMIZING PARTICIPATION OF WORLD'S CHEMISTS IN IUPAC AFFAIRS

After the President had referred to criticisms of IUPAC as being a "charmed circle" or "club", Dr. West presented the outline recommendations of the Bureau for the introduction of an Affiliates Scheme and to invite Presidents of the world's chemical societies to become a group associated with the Union, meeting in conjunction with the next General Assembly. Creation of a new committee was suggested by the Bureau to draw up a detailed scheme for consideration at Lyngby, consisting of Dr. T.S. West (Chairman), Dr. W. Fritsche, Prof. V.A. Kabanov, Prof. C.G. Overberger, Dr. W.G. Schneider, with Dr. M. Williams as Secretary. Possible privileges for Affiliates according to Dr. West were "preference" as candidates for appointment to Division Committees and Commissions, a reduced registration fee to IUPAC-sponsored symposia, provision of an IUPAC publication.

In his capacity as Chairman of the independent Study Committee on the Formation of an International Chemical Society, Prof. S. Mathias said the establishment by IUPAC of an Affiliates Scheme was now favoured, with an International Confederation of Chemistry as the main alternative.

The FRG Delegation reminded the meeting that Presidents of some twenty major national chemical societies had signed a letter opposing an international chemical society. In addition, more than half of ACS members responding to a survey were against such a society. The administration costs would be prohibitive.

In order not to undermine national chemical societies, the Italian Delegation was anxious that Affiliates should retain their membership, especially if the NAO was a separate body. Provision free-of-charge of an IUPAC publication, possibly CI, was advocated by Argentina. Dr. West agreed in principle, but care would be needed to ensure that the whole Affiliate membership fee was not consumed to cover the basic price of such a publication. A fee greater than US-$1 would be too high for many developing countries in the opinion of the Observer from Malaysia.

Any preference for Affiliates as candidates for election to IUPAC bodies was opposed by FRG, and Japan stressed that Affiliates should not have the privilege to vote at any level within the Union. The Swedish Delegation was worried about the finance necessary for some NAOs/National chemical societies to take on the extra administrative work in connexion with an Affiliates Scheme. Prof. Bjorkman asked that the IUPAC Finance Committee should be allowed to consider fully the financial implications of the Scheme for the Union. Canada believed the outline recommendations would have to go much further than presently envisaged if Affiliates were really to belong to the Union. Dr. West felt this could best be achieved by the formation of national Affiliate groups.

The discussion was closed and Council resolved (114 in favour, 6 against) to accept the recommendations of the Bureau. France suggested that the new Affiliate Scheme Subcommittee should include a representative from a developing country. Submission of comments was encouraged by the end of March 1982, so that the Subcommittee might meet in Spring 1982 in conjunction with the Executive Committee. If the Affiliate Scheme required changes to the statutes, Prof. Zollinger said they would have to be notified to the NAOs ten months before Lyngby.

PROPOSALS FORMALLY RECEIVED FROM NATIONAL ADHERING ORGANIZATIONS

The President indicated that, as a result of his correspondence with Dr. W. Fritsche about a limitation of total time un office for one person on various IUPAC bodies, the proposal before Council from FRG had been modified from the original submission. Prof. Zollinger also pointed out that since Davos the Executive Committee had implemented a guideline limiting every person in the Union to three commitments. While there was general sympathy with the principle advocated by FRG, the Bureau was concerned at the lack of flexibility. It had therefore recommended to Council not to accept the proposal: a suitably amended version should be elaborated by the Executive Committee for presentation ay Lyngby.

Dr. Fritsche made it clear to Council that FRG was not so concerned about upward movement through the Commissions to the Executive Committee and Officer positions of the Union, but more about limiting lateral movement from one Commission to another.

Israel was against any limitation: IUPAC existed to provide a service to chemistry by the best chemical experts from throughout the world. The US, UK and French Delegations spoke in favour of the principle, but were apprehensive of statutory change. Eventually Council accepted (154 in favour, 6 against) a proposal from UK to appoint a committee, not with the intention of making any statutory changes, but to look into the matter in general terms and to report back to the Bureau.

ADOPTION OF RECOMMENDATIONS ON NOMENCLATURE AND SYMBOLS

The following recommendations, amended as necessary from the provisional form and adopted since Davos by IDCNS on behalf of Council were ratified:

Interdivisional Committee on Nomenclature and Symbols

Use of Abbreviations in the Chemical Literature (Pure Appl. Chem. 1980, 52, 2229-2232)

Physical Chemistry Division

Electrode Reaction Orders, Transfer Coefficients, and Rate Constants: Amplification of Definitions and Recommendations for Publication of Parameters (Commission on Electrochemistry) (Pure Appl. Chem. 1980, 52, 233-240)

Macromolecular Division

Stereochemical Definitions and Notations Relating to Polymers (Commission on Macromolecular Nomenclature) (Pure Appl. Chem. 1981, 53, 733-752)

Analytical Chemistry Division

Nomenclature for Thermal Analysis - II & III (Commission on Analytical Nomenclature) (Pure Appl. Chem. 1980, 52, 2385-2391)

Nomenclature, Symbols, Units and their Usage in Spectrochemical Analysis - IV: X-Ray Emission Spectroscopy (Commission on Spectrochemical and Other Optical Procedures for Analysis) (Pure Appl. Chem. 1980, 52, 2541-2552)

PROPOSALS FOR NEW BODIES AND DISSOLUTION OF EXISTING BODIES

The President reported briefly on discussions held at Leuven by the Vice-President, Secretary General, and himself with the Presidents of the Organic, Analytical and Applied Chemistry Divisions, regarding the proposals (81.07.22) for suspension and dissolution of five Commissions. This had resulted in revised proposals (81.08.27) from the Bureau to Council.

Prof. Ourisson said that the critical assessment process had in several instances now been instituted within the Divisions by themselves, through the Division Vice-President, and in

future the total process should work better. The FRG and Canadian Delegations reiterated the necessity for the ssessment by the IUPAC Vice-President to be available three months before a General Assembly, so that relevant Commissions had sufficient time to react properly to criticism of their work.

Council resolved unanimously that:

(i) the IUPAC Committee on SCOPE should be dissolved;

(ii) the Commissions on Medicinal Chemistry, on Analytical Radiochemistry and Nuclear Materials, on Atmospheric Environment, and on Water Quality should continue in existence until 1983, subject to stringent conditions, but the Commission on Reclamation of Solid Wastes was to be considered as suspended;

(iii) working groups should be proposed by the relevant Division Committees to review the existing activities of the five Commissions in (ii) and in the light of any need for an expanded programme of work to recomme through the Division Committees whether the existence of these Commissions was justified beyond 1983;

(iv) the name of the "Commission on High Temperatures and Refractory Materials" should be changed to "Commission on High Temperature and Solid State Chemistry";

(v) subject to (ii) above, all existing Commissions of the Union should be allowed to continue for the next two years.

Prof. Zollinger pointed out that the final outcome of the present critical assessment was that no Commission had been dissolved at Leuven. This was a worrying financial matter.

RATIFICATION OF DECISIONS TAKEN BY BUREAU AND EXECUTIVE COMMITTEE SINCE 30TH GENERAL ASSEMBLY

All decisions taken by the two bodies since those approved by Council at Davos, were contained in the Minutes of the 40th-42nd and 93rd-97th Executive Committee Meetings. These Minutes had been circulated to all NAOs.

Council resolved unanimously that the decisions made by the Bureau and Executive Committee since the 30th General Assembly should be declared rarified.

ELECTIONS

There were 37 Delegations present with Category A3-C (inclusive) membership, constituting a total of 160 votes, and no delegations with Category D membership (non-voting on non-scientific matters).

Vice-President

As a result of a written and secret ballot (156 in favour), Dr. W.G. Schneider (Canada) was declared the elected Vice-President.

Elected Members to Bureau

Notwithstanding the earlier agreement that there should be 12 Elected Members of the Bureau during 1981-3 and as a gesture in response to the poor financial forecast for 1982-3, the Dutch Delegation proposed a reduction to 10 Elected Members. Prof. Zollinger reported that the Bureau had met in emergency session to consider the anticipated propsal. After discussing various implications the Bureau had reaffirmed its recommendation for 12 Elected Members and decided not to have a reserve list of 4 recommended candidates.

Council voted not to accept the Dutch proposal (26 in favour, 106 against), thereby reaffirming its earlier decision on the matter.

In a written and secret ballot for 6 vacancies:

* Prof. C.N.R. Rao (India)	148
* Prof. C.G. Overberger (USA)	146
* Prof. J. Michalski (Poland)	124
* Prof. A. Kjaer (Denmark)	122
* Dr. J.W. Barrett (UK)	116
Prof. A.D. Campbell (New Zealand)	82
Prof. K.L. Komarek (Austria)	48
Prof. R.L. Martin (Australia)	46
Prof. E.J. Ariëns (Netherlands)	38

Prof. S. Ito (Japan)	36
Prof. S. Sarel (Israel)	34
Prof. A.H. Guerrero (Argentin)	20

(* re-election for a further period of four years;
total voting 960, simple majority 81)

The 6 vacancies were declared to be filled by Dr. Barrett and Profs. Campbell, Kjaer, Michalski, Overberger and Rao.

Secretary General

The President informed Council that, after the statutory deadline (81.07.01) had passed for NAOs to make nominations for Officers and Bureau Members, Prof. Ourisson had accepted a new high-level position in the French government. This would make it difficult for him to involve fully as Secretary General in IUPAC affairs. Prof. Zollinger had preferred Prof. Ourisson not to resign, because the Bureau at Leuven would have been forced to nominate a replacement, thereby eliminating the democratic possibility for NAOs to propose a new Secretary General. The Bureau had therefore accepted his proposal for presentation to Council for the continuation in office of Prof. Ourisson until 1983, but with the appointment of Dr. T.S. West as Assistant Secretary General (a non-statutory position). Dr. West should attend meetings of the Executive Committee and Bureau, but without vote if Prof. Ourisson was present. The British National Committee for Chemistry had given its support to the appointment.

Council accepted unanimously the appointment of Dr. West as Assistant Secretaty General of the Union during 1981-3.

RATIFICATION OF DATES AND PLACES OF 32ND GENERAL ASSEMBLY AND 29TH CONGRESS

32nd General Assembly

Further to the deliberations of the Bureau, Council ratified the dates as 18th-26th August 1983 for the 32nd IUPAC General Assembly at the Technical University of Denmark in Lyngby.

29th Congress

On the recommendation of the Bureau, Council accepted an invitation from FRG to host the 29th IUPAC Congress at Cologne during 4th-12th June 1983, and approved the scope of the scientific programme (Statute 13.1) as indicated in the preliminary announcement.

PROVISIONAL PLACES OF 33rd GENERAL ASSEMBLY AND 30th CONGRESS

33rd General Assembly

On the recommendation of the Bureau, Council accepted, in principle, an invitation from France to host the 33rd IUPAC General Assembly. Possible locations were Lyon or Paris, using campus accommodation, at the end of August/early September 1985.

30th Congress

On the recommendation of the Bureau, Council accepted, in principle, an invitation from UK to host the 30th IUPAC Congress. Manchester was being investigated as the location for dates during September 1985, preferably immediately after the 33rd General Assembly.

34th General Assembly

The President indicated that Hungary, Sweden, and USA had expressed interest in hosting the General Assembly in 1987.

ANY OTHER BUSINESS

There being no other business, Prof. Zollinger thanked all members of IUPAC bodies and national delegations for their work at Leuven, Prof. G. Smets and his colleagues for the local organization and hospitality, and the staff of the IUPAC Secretariat - particularly Miss A. Troughton and Mrs. A.U. Inglis - for their considerable contribution.

After handing over the Presidency to Prof. Nagakura, the latter thanked Prof. Zollinger for his enormous efforts for the Union and positive leadership over the past two years.

STANDING COMMITTEES

Committee on Chemistry and Industry

Committee on Teaching of Chemistry

CHEMRAWN Committee

Committee on Chemistry and Industry

(MEETING OF 28 AUGUST 1981)

Recruitment of new Company Associates: A "basic document" pointing out the advantages of IUPAC membership for chemical companies should be issued in early 1982. Suckling and Rhyner agreed to prepare a draft a February 1982. Coordination by Jäger.

COCI Subcommittee on Organic Raw Materials: Büchel gave a brief introduction on the tasks and aims of this Subcommittee set up in 1980 following a recommendation of the CHEMRAWN Committee. Scharfe presented the 2nd parts of the literature surveys on recent developments in the fields of fossil and renewable raw materials, respectively. The surveys should serve as tools in the preparation of the 2nd CHEMRAWN Conference on Organic Raw Materials (CHEMRAWN III). It is planned to draw up such compilations regularly about twice each year.To have a more global view on important developments in these areas, Scharfe asked the Committee for assistance.Publications on this subject matter, especially from regions outside Europe or North America,are most welcome.
It was agreed that abstracts of these reports can be published in Chemistry International. Büchel proposed to make the reviews available for the Company Associates, e.g. via the COCI Information Letter.

Evaluation of current IUPAC programmes: The evaluation of current projects are in progress and should be finished in early 1982. Harrison and Skagius reported briefly on first results.
It was agreed to send the outstanding comments to Jäger by the end of 1981.

Suckling tabled a paper dealing with the results of an inquiry concerning the nomenclature projects of the Organic Chemistry Division (prepared by the Applied Chemistry Sub.Committee of the BNCC).
Zollinger thanked the Committee for its aid in the evaluation of published commission reports from the point of view of chemical industry. He informed the Committee about the conclusions he has drawn from the results of a critical assessment of the work of IUPAC's units undertaken since the last General Assembly. He pointed out that it is not planned to discontinue one of the existing commissions at the time being; nevertheless 5 commissions will be subject to stringent operation conditions in the coming two years. Büchel recommended the strengthening of the working party system within the Union as practised by the Macromolecular Division. This would lead to a higher flexibility and to an increase of the efficency of commission work.

CHEMRAWN Conferences: An extensive discussion was held on the matter of the various CHEMRAWN activities.
CHEMRAWN II: Büchel informed the Committee that the date of this Conference had been changed from February to 6-10 December 1982 due to several reasons. He expressed his concern that the new date may be inconvenient for many leading people from industry.

CHEMRAWN III: The COCI Subcommittee on Organic Raw Materials should be involved in the preparation of this Conference as early as possible.

Special attention was given to CHEMRAWN V. Büchel, with strong support from other COCI Members, expressed his concern on that subject. The proposed title "The Chemical Basis of Carcinogenesis" seems not to be in accordance with the contents of other CHEMRAWN Conferences. He would prefer a topic like "Chemistry and Health Care" (more emphasising the positive contributions of "chemistry to world needs") as a more suitable headline of such a CHEMRAWN Conference.

Suckling raised the question of the frequency of CHEMRAWN Conferences.A two years interval between two Conferences seems to be desirable. Takeda informed the Committee that another topic ("Functional Materials") has been forwarded by his Japanese colleagues to the CHEMRAWN Committee for further consideration.

Committee on Teaching of Chemistry (CTC): Jäger requested the Committee members for the nomination of suitable candidates from chemical industry to serve on CTC.

Changes in Membership: Dr. G.S.Harrison has been appointed as a new member of COCI representing the Company Associates of the Republic of South Africa. Dr.K.Takeda (Japan) has been appointed to the vacant position on the Committee caused by the retirement of Dr.Ooba.

Next Meeting: The next meeting will be held in London,UK on September 17, 1982.

Present: a) COCI Members: K.H.Büchel (in the chair),M.Good (for R.J.Fawcett), G.S.Harrison, G.Jäger, V.Macho, R.Mormont, P.Rhyner, A.S.Shoukry, K.Skagius, C.W.Suckling, K.Takeda

b) Guests: M.Gellender (in part), S.Kubba, G.Scharfe, H.Zollinger (in part).

Committee on Teaching of Chemistry

(MEETING OF 29/30 AUGUST 1981)

Please note that references to previous Committee meetings are given by the prefix of the year; thus meetings at Frankfurt, Ljubljana, Cassis, Dublin, Ljubljana are indicated by 76/, 77/, 78/, 79/, 80/, respectively; the second number refers to the paragraph in the full Committee minutes obtainable from the Secretary of CTC.

Present: Professor C.N.R. RAO (Chairman), Professor D.J. WADDINGTON (Secretary), Professor G. ILLUMINATI, Professor M. LAFFITTE, Professor D. VITOROVIC (Members)

Professor A.H. GUERRERO (Argentina), Professor A.R.H. COLE (Australia), Professor T. SCHONFELD (Austria), Professor B.T. NEWBOLD (Canada), Professor J. GAZO (Czechoslovakia), Professor P. MALKONEN (Finland), Professor M. CHASTRETTE (France), Professor H. BREMER (G.D.R.), Professor I. DILARIS (Greece), Mr. P.A. START (Ireland), Professor L. PAOLONI (Italy), Professor J.T. SHIMOZAWA (Japan), Mr. T.R. HITCHINGS (New Zealand), Miss M.P.B.A. PEREIRA (Portugal), Professor G.C. GERRANS (South Africa), Professor A. KORNHAUSER (Yugoslavia).

Professor XIA YAN represented Professor Ch. GUANG-XU (China).

Also present: Dr. DONNET (France), Dr. J. BURDETT (U.S.A.), Dr. M. GELLENDER (IUPAC), Mr. P.D. GUJRAL (IUPAC), Dr. J.V. KINGSTON (UNESCO), Dr. K.V. SANE (India), Professor G. TETERIN (UNESCO).

81/1 MINUTES OF PREVIOUS MEETINGS

Minutes of the previous meeting held in Ljubljana, Yugoslavia on 13/14 September, 1980 were approved.

31/2 INTERNATIONAL CONFERENCE ON CHEMICAL EDUCATION, MARYLAND, 9-14 AUGUST, 1981 (79/14, 80/10)

It was noted that over 500 participants from 78 countries attended the meeting. 120 of the participants were schoolteachers. The Secretary was asked to convey the grateful thanks of the Committee to Professor Gardner (Conference Chairman), Professor Heikkinen (Conference Manager), and Dr. Pearson (Programme Manager), for their outstanding contribution to the Conference.

The Committee received and considered the resolutions from the Conference and decided on specific courses of action to fulfil some of them.

It was noted that National Representatives would receive copies of the Source Book for Chemistry Teachers, given to Conference participants and that a copy of the Proceedings will also be sent to them. The Committee asked the Secretary to write to Professor Lippincott, the Conference Editor, to thank him for the considerable effort he made to ensure the success of the books, the former being a unique contribution to International Conferences.

It was noted that three articles about the Conference are being published in the Journal of the Chemical Society, two in the June 1981 and one in the January 1982 issue. In the January 1982 issue, there will also be an article on the work of CTC.

81/3 INTERNATIONAL NEWSLETTER ON CHEMICAL EDUCATION

It was noted that Newsletters No. 14 and 15 had been published in December 1980 and June 1981 and that a new contract with Unesco had been signed for issues No. 15 and 16. However, it was further noted that it was unlikely that the Newsletter could continue in its present form and have the present distribution if the money received from Unesco was not increased or if funds were not obtained *via* National Representatives from member countries.

Thus the Secretary was asked to write to National Representatives asking them to discuss this with their societies who have National Representatives on the Committee, asking the societies whether they would help towards the costs. The Committee did not wish to see the Newsletter sold commercially to individuals but asked the Secretary to investigate the possibility of arranging subscriptions to libraries. Dr. Gellender (IUPAC) told the Committee of the proposal from the Secretary General and Dr. Den Os that the Newsletter might be published with Chemistry International. There was no enthusiasm for this proposal but before a final recommendation was

made, Dr. Gellender agreed to send more detailed suggestions and costings.

81/4 CHEMICAL EDUCATION IN THE SEVENTIES

The Secretary reported that the edition was nearly sold out.

81/5 PROBLEMS OF CONVERSION TO SI UNITS AND ITS EFFECT ON THE TEACHING OF CHEMISTRY (77/3, 78/9, 79/8, 80/1)

Professor NEWBOLD presented a further report, principally dealing with replies from countries not affiliated with IUPAC and noted that the results were similar to those given.

81/6 COMPUTERS IN CHEMICAL EDUCATION (80/13)

The report, sent earlier by Professor PAOLONI was discussed. It was agreed to collaborate in a Workshop on Microcomputers in Chemical Education which Professor KORNHAUSER will arrange in Ljubljana. A Working Party of Professors CHASTRETTE, KORNHAUSER, PAOLONI and SHIMOZAWA was appointed.

81/7 PROJECT FOR AN INTEGRATED APPROACH TO THE TEACHING OF UNIVERSITY CHEMISTRY (79/23, 80/14)

Professor ILLUMINATI told the Committee that he was continuing with his preliminary findings and asked National Representatives to correspond with him giving details of any courses in their country which has adopted an integrated approach. The Working Group is Professors ADDISON, GUERRERO, Dr. HOFACKER, Professors ILLUMINATI, NEWBOLD and SHIMOZAWA.

81/8 FOR A SHIFT TOWARDS A CULTURE-BASED APPROACH TO CHEMICAL EDUCATION

Following Professor PAOLONI's original discussion, three papers of his have been published. Two are in the European Journal of Science Education and one in the International Newsletter on Chemical Education.

Professors KORNHAUSER and PAOLONI agreed to consider a seminar on Science as a part of modern culture to be held at International Centre for Chemical Studies in Ljubljana, possibly in 1982/83.

81/9 PUBLICATION OF A LIST OF RELATIVE ATOMIC MASSES FOR EDUCATIONAL PURPOSES (80/18)

The Commission of Atomic Weights, Division of Inorganic Chemistry has agreed to look at and revise the list of 4-place atomic weights of elements prepared for CTC. The Commission informed CTC that it was preparing a table of 5-place atomic weights and agreed to send copies for distribution.

81/10 BIBLIOGRAPHY OF CHEMICAL EDUCATION JOURNALS

The Secretary reported that the Bibliography prepared in collaboration with Unesco, has been published. It is hoped that it will be useful for teachers at all levels, for teacher educators and administrators. Details of over 160 journals from over 60 countries are included.

81/11 SEVENTH INTERNATIONAL CONFERENCE ON CHEMICAL EDUCATION

It was agreed to accept the invitation from the Comité National de Chimie to hold the next Conference in Montpellier in the Summer of 1983 and to associate other regional bodies with the Conference and to invite Unesco to collaborate. Professor Chastrette will be Conference Organiser and Dr. Cros the Conference Manager.

81/12 LOCALLY-PRODUCED AND LOW-COST EQUIPMENT (77/5(ii), 78/12, 79/7, 80/8)

The first Regional Workshop on low-cost, locally-produced equipment for senior secondary school, college and university teachers was held in Madras 16-23 April 1981, in collaboration with UNESCO and COSTED. Over 30 participated coming from India and other countries in the S.E. Asia region. The consultants included Professor D.J. Waddington (IUPAC CTC), Dr. J. Holbrook (Hong Kong), Dr. S. Trevino (Mexico), Dr. S. Thompson (USA) and Dr. K.V. Sane (India). The highlights of the Workshop included the testing of pH meters and conductance bridge manufactured locally by Dr. Sane and his group at the University of Delhi. These were found to compare favourably with the equivalent commercial instruments and at ca one-tenth the cost. A Manual giving details of the equipment and suggested experiments for first and second year university courses is being prepared in collaboration with COSTED. It was also noted that the second Regional Workshop is being planned for August, 1983, in Sao Paulo. The Director of the Workshop will be Professor Ernesto GIESBRECHT, National Representative of Brazil, and the Workshop will again be held in collaboration with UNESCO and COSTED.

81/13 COLLABORATION WITH OTHER REGIONAL ORGANISATIONS (80/4(9), 80/23)

The Secretary reported on correspondence and meetings with Dr. S.R. Samady (UNESCO) in which he expressed our concern to involve countries, who are not members of IUPAC, in our activities. Dr. Samady had been unable to suggest means by which we could fund the travel costs to our meetings of representatives from the regional

organisations (e.g. FLAQ, AFSAU, FACS, ALECSO). However, the Secretary told members of the Committee that he sends Newsletters and Minutes of meetings to Chairman of the Chemistry Committees and Newsletters to individuals in over 50 countries not affiliated to IUPAC. Professor Adjangba (AFSAU) attended the informal committee meeting in Maryland in August 1981; Dr. Chaverri, who was Secretary of the recent regional chemistry meeting in Central and South America, was invited but was unable to attend. Further, over 40 countries not affiliated to IUPAC were at the Maryland Conference. The Committee continued to be concerned about involving as many individuals and associations as possible in its work.

81/14 COMMITTEE OF SCIENCE AND TECHNOLOGY IN DEVELOPING COUNTRIES (COSTED)

It was noted COSTED collaborated with CTC in the following ways during 1980/81:

(i) Collaboration with the Madras Workshop in Low-Cost Equipment and funding for further development work and courses with Dr. K.V. Sane;

(ii) Funding for a participant from a developing country to the Maryland meeting.

There is a proposal to hold a meeting on Chemical Education in the Developing Countries in Sri Lanka in 1982.

81/15 COLLABORATION WITH OTHER IUPAC BODIES

The Chairman and Secretary reported on meetings with other IUPAC bodies during the General Assembly in Leuven: (i) There was no overlap with the work undertaken by the Commission of Teaching, Division of Clinical Chemistry or by the Commission on Medicinal Chemistry, Division of Organic Chemistry. The Commission had requested that a representative of each committee should sit on the other. This was agreed and the Secretary was asked to write to the Commission. (ii) The Commission of Photochemistry, Division of Organic Chemistry, was preparing a Manual to encourage the teaching of photochemistry in initial courses at the tertiary level, including simple experiments. The Commission will seek advice from CTC before publishing their Manual. It was suggested that the Manual could be published as an edition of the Newsletter. (iii) A report on the meeting with the Commission of Atomic Weights, Division of Inorganic Chemistry is given in Minute 81/9.

Members of the Commission on Biotechnology, Division of Applied Chemistry could not attend the meeting but will be corresponding with CTC.

81/16 RETIREMENT OF PROFESSOR C.N.R. RAO AS CHAIRMAN OF CTC

Professor RAO announced his retirement as Chairman of CTC under IUPAC rules. Professor VITOROVIC, passing a vote of thanks, underlined that under his chairmanship, Professor RAO had ensured a friendly atmosphere, had ensured that our work was of importance for both developed and developing countries and his own personal achievement had been an inspiration for the Committee as a whole.

Professor TETERIN emphasised how Professor RAO had encouraged a very close working relationship between CTC and UNESCO.

CHEMRAWN Committee

(MEETING OF 28 AUGUST 1981)

Present: Dr B W Rossiter (Chairman), Dr D Behrens, Dr H Egan, Dr C G Overberger, Dr W G Schneider and Professor G E Zaikov, members; together with Dr S Inoue (for Dr Uchida, member); Professor H Zollinger (President), Professor S Nagakura (President-Elect), Professor F W Sunderman Jr (Clinical Chemistry Division); Professor R C Mehrotra (Inorganic Chemistry Division); Dr D M Brouwer (Organic Chemistry Division); Dr D Lide (Physical Chemistry Division); Mr T H G Michael, Dr L Renzoni (Canadian NCC); Professor J B Donnet (French NCC); Professor E Sarel (Israeli NCC); Dr J Still (US NCC); Dr M Singh (Federation of Asian Chemical Societies); Dr W Fritsche (Federation of European Chemical Societies); Dr J V Kingston (UNESCO); Dr M Castegnaro (International Agency for Research on Cancer); and Dr M Gellender (Chemistry International).

Apologies were received from Dr M Uchida and Dr W B Mors (member-elect); and from Mr S G Luxon (Applied Chemistry Division) and Dr E Grzywa (Polish NCC) (observers).

CHEMRAWN II

The date of the CHEMRAWN II International Conference on Chemistry and World Food Supplies - the New Frontiers was now changed to 6-10 December 1982. The Conference publications will include proceedings, a prospectus and recommendations in both an inexpensive form as well as orthodox library binding, together with a popularised version. The programme was now essentially complete and in final draft but still needed to be balanced. There would be six sections, together with a "New Frontiers" section and another devoted to 'a blue-print for the future' to identify new research directions and priorities for these. This would not be a mere review but an assessment from world leaders on what was needed and what was possible. The objectives of the Conference will be to identify and put into perspective those areas of research and development having the potential to significantly increase food production and improve food storage and processing, to strengthen scientific research in developing nations, particularly in those fields which require professional competence and initiative without excessive capital and human resources; and to accelerate implementation of research priorities and objectives by fostering co-operation among governments, industries and universities.

CHEMRAWN III

Proposals for CHEMRAWN IV Second World Conference on Future Sources of Organic Raw Materials were discussed. A Literature Survey on Raw Materials for Chemicals and Plastics: Recent Developments in Renewable Raw Material Production and Conversion was received from the COCI Sub-committee on Organic Raw Materials. Several possible locations were considered and it was agreed to discuss the Netherlands, if possible in 1984, with the Committee on Chemistry and Industry. It would be necessary to have due regard to other IUPAC meetings on Catalysis (in June) and Biotechnology (in September) in Germany that year.

CHEMRAWN IV

Proposals for CHEMRAWN IV, Chemistry and Resources of the Oceans were discussed further. The meeting would probably be held at the Wood's Hole Oceanographic Institute in Massachusetts, possibly in late September 1984. The arrangements will be developed on this basis. In a discussion of the

general basis for funding CHEMRAWN meetings, Professor Nagakura said that the main responsibility lay with the organising committee, which might be national or international. Dr Singh said that the country in which the meeting was to be held should normally meet all local expenses. It was agreed that this would usually be on a national (or local regional) basis, the main exception being when it was planned to hold the meeting in a developing country (as was the case for CHEMRAWN II), when funding might be drawn from a wider area.

CHEMRAWN V

Following discussions on the original proposal for a conference in 1985 on the chemical basis of carcinogenesis it was suggested (and in subsequent discussions with the Committee on Chemistry and Industry, confirmed) that the title should be more positive, such as Chemistry and Health. This would be further developed in consultation with COCI, the Clinical Chemistry Division and other international organisations including the International Union of Biological Sciences.

CHEMRAWN VI

Detailed planning for the CHEMRAWN VI Conference on the Chemistry and Technology of Water and Waste Water, to be held in the Federal German Republic in 1986, would probably commence in 1983/4. The programme should include some problems of developing countries, although the main programme would be directed primarily at handling water and waste water in industrialised countries.

Other CHEMRAWN Meetings

The Committee recognised that it already had a full programme of international symposia and decided to take no immediate action on proposals for other meetings, including Materials Science, Population and Fertility Control and Solar Technology.

Next Meeting

It was agreed that the next meeting would be held at 0900 hr on 20 February 1982 in Washington DC.

CHEMRAWN MEETINGS: SUMMARY OF PROVISIONAL PROGRAMME

II	6-10 December 1982, Manila. Chemistry and World Food Supplies - The New Frontiers.
III	1984, The Netherlands. Second World Conference on Future Sources of Organic Raw Materials.
IV	June/September 1984, Wood's Hole, Mass. USA. Chemistry of the Resources of the Oceans.
V	(1985 Lyon). The Chemical Basis of Human Disease.
VI	1986, Federal Republic of Germany. The Chemistry and Technology of Water and Waste Water.

I. PHYSICAL CHEMISTRY DIVISION

Commission on Physicochemical Symbols, Terminology, and Units
Commission on Thermodynamics
Commission on Electrochemistry
Commission on Physicochemical Measurements and Standards
Commission on Moleculare Structure and Spectroscopy
Commission on Colloid and Surface Chemistry Including Catalysis

Physical Chemistry Division Committee

(MEETINGS 25, 29 and 30 AUGUST 1981)

It had been planned that the Committee would recommend the formation of a Commission on Chemical Kinetics at this meeting, but it had not been possible to complete the requirements by the Executive Committee that such a recommendation must be accompanied by a detailed programme of work for the new Commission. The President was authorised to proceed and present the case as soon as possible to the Bureau with a view to formation of the new Commission before the next General Assembly. After examination of the programmes of the existing Commissions, their continuation was recommended. Special consideration was given to the programme of I.4, about which some criticism had been received from the Officers of the Union. The programme and membership of the Commission had been extensively revised during its current meetings at Leuven. Commission I.6 substantially strengthened its programme in heterogeneous catalysis. The Subcommittee on Assignment and Presentation of Uncertainties of Thermodynamic Data had completed its task and was dissolved. A new Subcommittee of Commission I.2 on Transport Properties was approved. The name of a Subcommittee of Commission I.5 was changed from 'Symmetry Notations for Molecular Spectroscopy' to 'Notations and Conventions for Molecular Spectroscopy'. Much progress was made with documents at Leuven, with more than ten being totally or substantially completed.

Note was taken of the new "Guide-lines for IUPAC Projects" and the draft "Initiation" and "Annual Progress" Report forms, and methods for the future assessment and control of the Division's programme were considered. It was agreed that the Vice-President, with the help of suggestions from Committee members, should prepare a critical assessment of the present programme for distribution in advance of the next General Assembly. This paper should also include topics in physical chemistry that are suitable as IUPAC projects but are outside the scope of existing Commissions. The absence of any chemical engineering content in Current Programmes was noted, and it was thought that topics in applied physical chemistry, of industrial importance, might increase chemical engineers' interests in IUPAC.

The discussion at the previous General Assembly about dissemination of IUPAC Recommendations was resumed and it was agreed that greater efforts are needed to increase their effectiveness. Recommendations arising from this discussion were 1) that the organisers of IUPAC-sponsored conferences should be asked to conform to IUPAC Recommendations both for presentation of the papers and their final publication, 2) that greater efforts should be made to persuade editors to require conformation to IUPAC Recommendations, 3) that individual members should publicise Recommendations whenever possible and 4) that the maximum use be made of the arrangments with Pergamon about copyright for extensive republication. An unanswered question was whether a shortened version of, for example, the Green Book should be produced for teachers and students.

The revised proposal for IUPAC to become open for individual membership as a form of international chemical society was welcomed as an improvement over the original. However it was felt that the subscription must be kept low and that this would preclude distribution to members of Chemistry International. Without that it was questioned by some whether the individual chemist will find IUPAC offers sufficient to induce him to join.

Dr. D.R. Lide confirmed that he was willing to continue in office as Vice-Presisent, Dr. E.D. Becker was elected as Secretary in place of Dr. D. Ambrose, who was resigning at Leuven, and Dr. K.N. Marsh, Dr. R. Parsons and Prof. G.M. Schneider were elected as new members of the Division Committee. Prof. I. Wadsö and Prof. P. Fauchais were appointed as co-opted members to represent Biothermodynamics and Plasma Chemistry respectively.

The next meeting will be at the General Assembly at Lyngby, Denmark in 1983.

I.1. Commission on Physicochemical Symbols, Terminology and Units

(MEETINGS ON 27 - 29 AUGUST 1981)

1) Manual of Symbols and Terminology for Physicochemical Quantities and Units.

Translation of the Manual into French, Spanish and Japanese have been or are to be published. A Greek version is in preparation. An extensive part of the Manual will also be included in the "Handbook of Chemistry and Physics".

The commission welcomes the establishment of a working group by the Commission on Thermodynamics to advise on any revision of the Manual.

2) Symbols and Terminology : Recommendations.

The Commission discussed and approved in joint meetings the following documents :

a) a supplement to "Definitions, Terminology and Symbols in Colloïd and Surface Chemistry" prepared by Dr. Kerker and Dr. Kratovhil of Commission I.6. This supplement is devoted to light scattering.

b) the final version of Appendix IV to the Manual, prepared by Commission I.2. This document deals with the notation for states and processes in thermodynamics.

A lexicon on Surface Chemical Physics (Commission I.6) prepared R.S. HANSEN has also been discussed. Revised drafts will be circulated for approval.

Commission I.6, I.2, and IV.1 presented a number of suggestions which should be discussed for any revision of the Manual.

3) Quantities and Units :

a) Dalton : The Commission considers that it is undesirable to have two names for the same unit and that it would not support the use of the Dalton in physical chemistry. Nevertheless, in a revised manual, it could be stated that Dalton is used by biochemists.

b) Atomic and molecular weights : The Commission considers that "atomic weight" and "molecular weight" can be used as alternative names for relative atomic mass and relative molecular mass. It does not favor any of the new names that have been proposed.

c) Amount of substance : The Commission is not in favor of any of the names (chemiance, numerity, numberance, stochion, stoichion, stochias, stoichias) which were suggested to replace the amount of substance. In a revised manual, pratical example on the use of the term "amount of substance" should be given.

4) Projects :

The active projects of the Commission are the following :

a) Continuing review of documents of other Commissions to ensure consistency with the manual.

b) Revision of the manual with inclusion of some material from the Appendices.

c) Preparation of an abbreviated version of the manual for general use by the chemical community including teachers and students.

d) Interaction with National Chemical bodies to promote translation, republication and dissemination of the manual in different countries.

5) Commission Membership :

Dr. K. KUCHITSU was elected Chairman and it was agreed to recommend Dr. E.T. DENISOV and D.D. WAGMAN as titular members. Dr. N. KALLAY is recommended to continue to serve as titular member. Dr. D.H.W. den BOER resigned for personal reason.

Dr. WHIFFEN and PEREZ-MASIA are recommended to continue on the Commission as associate members as well as the retiring titular members Dr. D. LIDE Jr. Appointement of Dr. LEKKERKERKER as associate member is also recommended, as well as a member of ISO - Tc12.

Dr. L. TREINDL is accepted as the National Representative of Tchecoslovaquia.

It is with great sorrow that the members of Commission I-1 learned of the death of Professor KOEFEOD who acted as a Titular and Associate Members from 1971 to 1980.

6) Present :

D.R. Lide, N. Kallay, H. Homann,

K. Kuchitsu, A. Schuyff, I. Ansara.

D. Wagman (invited observer).

Next meeting :

No further meeting are planned until the 1983 General Assembly.

I.2 Commission on Thermodynamics

(MEETINGS ON 26 - 29 AUGUST 1981)

1) Appendix IV of the Manual of Symbols and Terminology for Physicochemical Quantities and Units (Provisional document: Pure Appl.Chem. 51(1979)393-403). A camera-ready version of the final document was prepared and the copies were sent to the Division. The main point is the recommendation of the new standard pressure $p^{\circ} = 10^5$ Pa (= 1 bar). Procedures have been proposed and discussed to promote its usage. R.D. FREEMAN is encouraged to continue the work on his paper entitled "Conversion of Standard (1 atm) Thermodynamic Data to the New Standard State Pressure, 1 bar" and to publish it. Any contribution to this problem will be welcome. The problem will be included in the agenda of the next meetings.

2) Future revision of the Manual and its Appendices. Revision of the Manual and its Appendices seems to be necessary to Commission I.2. For this purpose a Task Group is set up (G. SOMSEN (Chairman), G.T. ARMSTRONG, R.D. FREEMAN, M. LAFFITTE, M. RÄTZSCH, G.M. SCHNEIDER, H.S. SUGA). An Intercommission Task Group has also been suggested and proposed to the Division. R.D. FREEMAN, G.M. SCHNEIDER and G. SOMSEN will be the representatives of Commission I.2 if this proposition is accepted.

3) Possible revision of "A Guide to Procedures for the Publication of Thermodynamic Data". The chairman will ask for advice from the authors of this guide in view of a possible revision.

4) Due to frequent modifications of the values of atomic masses, it is often difficult to assess the values used in a thermodynamic calculation. Commission I.2 is pleased to know that a 5-figures table may be published together with a more accurate one by the Commission II.1.

5) A Provisional Report of the Subcommittee on Chemical Kinetics on "Symbolism and Terminology in Chemical Kinetics" (Pure Appl.Chem. 53(1981)753-771) is discussed and some suggestions will be sent to Prof. LAIDLER in order to reach full accordance with the Manual.

6) Set-up of a new Subcommittee on Transport Properties with J. KESTIN (Chairman), S. ANGUS, H. HANLEY, F. HENSEL, K. LUCAS, A. NAGASHIMA, C. NIETRO DE CASTRO, W.A. WAKEHAM.

7) A new IUPAC project entitled "Enthalpies of Vaporization of Organic Compounds" (by V. MAYER, V. SVOBODA and J. PICK, Czechoslovakia) is set up under the direction of the Subcommittee on Thermodynamic Tables.

8) A book on Thermodynamic and Transport Properties of Organic Salts (by P.FRANZOSINI and M. SANESI, Italy) has been published under IUPAC sponsorship.

9) Commission I.2 has discussed in length the problem of dissemination and acceptance of Commission reports. Too many people do not yet know IUPAC recommendations! A lot of suggestions have been made to improve the situation.

10) The 7th International Conference on Chemical Thermodynamics will be held in London, 6-10 September 1982. Chairman: M.L. McGLASHAN . The 8th International Conference on Chemical Thermodynamics will be held at McMasters College in Canada, September 1984. Chairman: P.A.G. O'HARE.

11) Next meetings of Commission I.2: London, September 1982.

12) Commission membership: Due to financial restrictions retiring titular members will not be replaced. G.M. SCHNEIDER and S. ANGUS will be the next Chairman and Secretary, respectively. Titular members: G.T. ARMSTRONG, V.A. MEDVEDEV, Y. TAKAHASHI, W. ZIELENKIEWICZ. Associate members: M. DIAZ-PENA, M.B. EWING, P. FRANZOSINI, R.D. FREEMAN, H.V. KEHIAIAN, P.A.G. O'HARE, G. OLOFSSON, M. RÄTZSCH, J. ROUQUEROL, G. SOMSEN, H. SUGA, V.E. VANDERZEE.

13) Present: LAFFITTE, Chairman; ANGUS, ARMSTRONG, DIAZ-PENA, FRANZOSINI, FREEMAN, RÄTZSCH, SCHNEIDER, SOMSEN, TAKAHASHI, WADSÖ, ZIELENKIEWICZ; Observers: WESTRUM Jr., JORGENSEN.

I. 3 Commission on Electrochemistry

(MEETINGS ON 26 - 29 SEPTEMBER 1981)

The definitive form of the report on Transport Phenomena in Electrolytic Systems (N. Ibl) will appear in the October 1981 issue of P. and A. Chem. Progress on the Critical Compilation of Electrode Potentials (A.J. Bard and R. Parsons) was reported. Almost all chapters are completed in first drafts and most of these have been reviewed. It is expected that the book should be ready for publication in about a year. The effect of the proposal to change the standard pressure to one bar was discussed. Decision on converting to this standard will be made in the next two months in the light of further information. The report on Adsorption at Electrified interfaces was discussed in detail in the light of comments received from some members of I-6 and V-6, as well as from consulted experts. A revised version will be prepared for publication in the next 3 months. The report on Recommendation for Selection of Reference Redox Systems (J. Kuta and G. Gritzner) was approved with minor modifications. It will now be submitted to the Division for approval for publication as a preliminary report. Prof. Plambeck reported that it would be possible to prepare a report on a Standard for Redox Potentials in Fused Salts and he was asked to complete this as soon as possible. He considered that no useful recommendations could be made at the present time about the acid-base concept in fused salts. However the Commission felt that a general position paper on the acid-base and Oxydation-Reduction concepts would be useful and this will be prepared. Prof. Heusler presented his contribution on Electrochemical Techniques for the Study of Surface Film which will form part of a general document on the study of surface film being prepared by Commission I-6. Some clarifications of the approach was gained in discussion with Commission I-6 and the document will be revised accordingly.

Dr. Memming and Prof. Bard raised the problem of a severe clash of nomenclature between physicists and electrochemists in the use of symbols for energy and electrode potential. A compromise solution was proposed and this will be incorporated in a document of Semiconductor in Electrochemistry to be prepared in the next few months. Together with this, under the general heading "Photoelectrochemistry", the problem of the combination of spectroscopy and electrochemical data will be addressed.

Dr. Covington exposed the present situation on the definition of the pH scale and recommended a compromise solution. This was discussed in Commission I-3 as well as in the point meeting with Commission V-5. In view of the fact that the compromise was recommended by the principal protagonists in this discussion, the commission supports the acceptance of the compromise solution although some ambiguity remains.

Dr. Niki reported on the extensive computer based compilation of Electrode Kinetic Data which he is making. This is being supported by the Japanese Government and is already extensive. Complete coverage will be obtained with the aid of cooperating groups in other regions of the world.

Dr. Justice reported on the present state of compilation of conductance data. In order to make this available to the scientific public a hard copy form will be prepared and the possibility of publication will be explored. Direct access to the data base in a computer system may also be possible.

The following future projects were proposed for immediate future:

- Absolute Electrode Potential : an Explanatory note (S. Trasatti).
- Recommendation for Processing of Conductance Data (J.C. Justice and R. Fernandez-Prini).
- Fundamentals of Energy Conversion (K.E. Heusler).
- The calculation of the Standard Potential of an Excited State. Problem of Combination of spectroscopic and electrochemical data (R. Memming, K. Niki and J.A. Plambeck).

In addition, the following projects will be considered and, if it is decided that they are suitable to be studied under IUPAC auspices, work will begin at the next General Assembly.

- Corrosion Nomenclature (S. Trasatti, K.E. Heusler and J.A. Plambeck.
- Units and Nomenclature in Signal Processing by Convolution and Semiintegral Methods (A.J. Bard).

- Nomenclature Reaction Polarization and of Metal Deposition (E. Budevsky and M. Keddam).

- Extension on Adsorption at Interfaces in Electrochemical Systems (with Commission I-6).

- Solid Electrolytes (Y. Sato).

- Standard Potentials in Non-Aqueous Solutions.

Following the suggestion of the Division Committee the proposal for a Sub-Commission on Bioelectrochemistry was discussed. It was decided that Dr. Nikki and Dr. Plambeck would investigate opinion to assess whether there are problems to which a sub-commission in this area could usefully contribute.

I.4 Commission on Physicochemical Measurements and Standards

(MEETINGS OF 26 - 28 AUGUST, 1981)

Status of Current Work:

1. Four additional chapters on Recommended Reference Materials for the Realization of Physicochemical Properties have appeared in Pure and Applied Chemistry. The four chapters are Permittivity, Electrolytic Conductivity, Viscosity, and Thermal Conductivity. A chapter on Relative Humidity is in the process of editing.
2. The Annotated Bibliography on Accuracy in Measurement has been expanded to include references in languages other than English. It should be published shortly.
3. The paper on Uncertainties in Measurement was presented. The Commission decided that, because of the present conflicting use of terms used to describe uncertainties, particularly in relation to reference materials, it could not publish any recommendations at present. It was recommended that the contribution resulting from the project should be considered for publication in the proceedings of a recent IUPAC sponsored symposium on this topic.
4. The Symposium on Purity was abandoned.
5. The Project on Recommended Reference Methods was modified. It is now planned to include in this project an update of the Recommendations on Reference Material.

Planned Work

1. The major project will involve updating and expanding the Recommendations on Reference Materials. Each recommendation will include an Introductory Chapter outlining the criteria required to realize the minimum uncertainty when using a reference material. A short account of the principles involved in the various experiments will be included. A list of materials suitable to use as reference materials when the highest accuracy is not required will be included in an addendum to the recommendations. The expanded recommendations will be published as a single volume.
2. It is planned to arrange joint meetings at the next IUPAC meeting to discuss our various recommendations.
3. It is planned to arrange a joint meeting with other Commissions at the next meeting to discuss the use of terms in precision and accuracy, particularly as they relate to reference materials.
4. A Project was initiated to formulate clear guidelines for the statement of purity of compounds.

Reports Received

Revision of the IPTS 1968, Density of water, activities of ICTA, OIML, ISO-REMCO,and the OECD Chemical testing programme as well as the details of the BIPM questionaire on Precision and Accuracy.

Commission Membership:

Proposed for election as Titular Members were: G. Uriano, L. Crovini, and R. Sabbah; for Chairman K. Marsh; for Secretary and Vice-Chairman; G. Uriano. Proposed for election as Associate Members were E. Brunner(previous titular), S. Bukowiecki, A. Head, A. Ishitani, W. Kunzel, B. Le Neindre, G. Milazzo(previous titular), L. Molle, G. van Wijk, and K. Wandelburg.

Next Meeting:

Denmark 1983 (four days).

Members Present

All Titular and Associate Members were in attendance except W. Trabczynski. National Representatives present were Y. Mashiko and T. Plebanski.

I.5 Commission on Molecular Structure and Spectroscopy

(MEETINGS OF 26 - 29 AUGUST 1981)

Present: Titular Members: E. D. Becker (Chairman), G. Zerbi (Secretary), V. A. Koptyug, C. N. R. Rao, C. Sandorfy, D. W. Turner, J. F. J. Todd; Associate Members: H. A. Willis, J. R. Durig; Subcommittee Members: C. J. H. Schutte, E. Roth, A. R. H. Cole, G. Snatzke; Division President: N. Sheppard; Observers: R. Colin (Belgium), D. Westmoreland (US), A. Zewail (US)

1. The following documents were approved for publication in provisional form and will be forwarded to the Physical Chemistry Division.

a) Provisional Recommendations for the Calculations of Molecular Electrical Properties from Infrared and Raman Intensity Measurements.

b) Symbolism and Conventions in Circular Dichroism and Optical Rotatory Dispersion.

c) Further Recommendations for Symbols and Terminology in Mass Spectroscopy.

2. The document "List of Journals for Dissemination of Information in Spectroscopy" was approved after some additions were made. The Commission has restated its strong support of widespread dissemination of IUPAC information and hopes that the list of journals will be accepted and used in the future by IUPAC offices for spreading information in the field of spectroscopy.

3. The contribution by this Commission to a joint document with Commission III.3, "Glossary of Terms Used in Photochemistry," was approved.

4. The Subcommittee on Symmetry Notation for Molecular Spectroscopy has been renamed Subcommittee on Notation and Conventions for Molecular Spectroscopy. This action was taken in view of the increased scope of work by this subcommittee.

5. The projects entitled "Exploration of errors and data presentation requirements for NMR," "Exploration of need for standardization in luminescence into spectroscopy," and "Computer-based collections of spectral data" were discontinued.

6. Future projects. The work of the Commission and of the Subcommittees for the next two years has been organized as follows:

a) 10 projects, listed at the end of these minutes, are continuing and should be completed by the next IUPAC General Assembly in 1983.

b) 4 new projects, listed at the end of these minutes, have been planned and the work distributed among the various members of the commissions or subcommittees.

7. Joint meetings were held with Commissions I.6 and VI.3 to consider a few specific points relative to documents to be prepared by those Commissions. Agreement was reached on all points.

8. Membership. The Composition of the Commission was considered and the following recommendations were made for new members:

Titular Member: J. R. Durig (US); Associate Members: R. K. Harris (UK), J. Maier (Switzerland), W. B. Person (US), C. J. H. Schutte (South Africa), M. Tasumi (Japan); National Representative: R. Colin (Belgium); Subcommittee on Infrared and Raman Spectroscopy: G. Zerbi (Italy, chairman), L. A. Gribov (USSR), W. Kiefer (Germany), A. Zewail (US); Subcommittee on Mass Spectroscopy: A. Mandelbaum (Israel). The following new officers were elected: C. N. R. Rao (India), chairman; J. R. Durig (US), secretary.

PROJECT TITLE	COORDINATOR
a. Symbols, Terminology and Applications of Electron Spectroscopies	D. W. Turner C. N. R. Rao
b. Symbols and Nomenclature for Electronic Spectroscopy in Photochemistry	C. Sandorfy
c. Specifications for Infrared Reference Spectra of Materials in Vapour Phase above Ambient Temperature	R. N. Jones J. R. Durig
d. Recommendations for Symbols and Nomenclature in Raman Spectroscopy	J. R. Durig
e. Test Data for Normal Coordinate Calculations	M. Tasumi
f. Calculation of Molecular Electrical Properties from IR and Raman Measurements	G. Zerbi
g. Tables of Wavenumbers	A. R. H. Cole
h. Further Recommendations for Symbols and Terminology in Mass Spectroscopy	J. F. J. Todd
i. Symbolism and Conventions in Circular Dichroism and Optical Rotatory Dispersion	G. Snatzke
j. Recommendations for Notation and Conventions for Molecular Spectroscopy	C. J. H. Schutte
k. Computerized Data Banks for Spectroscopy	V. A. Koptyug
l. Definition and Quantities in Optical Spectroscopy	N. Sheppard H. A. Willis
m. Quality Standards of Mass Spectra	J. Todd
n. Glossary of terms and usage in Laser Spectroscopy and Chemistry	G. Zerbi

I.6 Commission on Colloid and Surface Chemistry Including Catalysis

(MEETINGS OF 26 - 29 AUGUST 1981)

1. PRESENT

J. Lyklema (Netherlands, chairman), J. Haber (Poland, vice-chairman), M. Kerker (USA, secretary), R.S. Hansen (USA, TM), M.W. Roberts (UK, TM), K. Tamaru (Japan, TM), E. Wolfram (Hungary, TM), P.C. Gravelle (France, AM), H. van Olphen (Netherlands, AM), K.S.W. Sing (UK, AM), L. Ter Minassian-Saraga (France, AM), R. Haul (BRD, NR), K. Meyer (DDR, NR), A. Maroto (Argentina, NR).

2. LIGHT SCATTERING

A supplement to Definitions, Terminology and Symbols in Colloid and Surface Chemistry, Section 1.14 Light Scattering was approved by Commission I.6 for submission to the Division of Physical Chemistry.

3. SUBCOMMITTEE ON CHEMICAL PHYSICS OF SURFACES

The subcommittee reached agreement on draft revisions in all areas of electron spectroscopies, thermal desorption and electron stimulated desorption spectroscopies, and a number of topics in vibrational spectroscopies. Directions for revisions in other areas of vibrational spectroscopy, electrochemical characterization, and work function topics were established. Need for inclusion of additional topics, especially ion scattering spectroscopies, was established and tentative assignments made.

4. SUBCOMMITTEE ON REPORTING GAS ADSORPTION DATA

Members of the subcommittee met to discuss and revise the draft of the manual presented for consideration by Commission I.6. It was proposed and accepted that the manual be published on a provisional basis.

5. REPORTING FILM BALANCE DATA

This document was thoroughly discussed by commission members. A revised version will be circulated to members by October 31.

6. ADSORPTION FROM SOLUTION

This project will be continued for two years during which period it is expected the document will be completed.

7. PURITY STANDARDS OF SURFACTANTS

This project was discontinued.

8. SUBCOMMITTEE ON CATALYSIS

The subcommittee proposed the following tasks:

A. Preparation of a paper of about 10 pages which will define a number of important problems in the science of catalysis.

B. The first draft of a "Manual of Catalyst Characterization" will be prepared.

C. The project on preparation of Standard Reference Catalysts will be continued.

D. It was proposed that a manual on Standard Methods and Procedures for Catalyst Characterization be prepared.

9. MISCELLANEOUS

Commission I.6 met with Commission V.8 to discuss cooperative efforts in connection with compilation of solubility data on surfactants.

10. ELECTIONS

The following titular members were reelected for a four-year period: J. Haber (Poland), M. Kerker (U.S.), and K. Tamaru (Japan). Present officers will continue in their respective offices.

P.C. Gravelle (France) was reelected associate member for a four-year term. H. van Olphen (Netherlands) was elected associate member for a two-year term. Per Stenius (Sweden) was elected associate member for a four-year term.

The following national representatives were accepted: D.H. Everett (UK), M. Froment (Belgium), R. Haul (BRD), A.S. Kertes (Israel), A. Kitahara (Japan), S.G. Mason (Canada), A. Maroto (Argentina), K. Meyer (DDR), L.C. Nagy (Hungary).

Milton Kerker, Secretary

II. INORGANIC CHEMISTRY DIVISION

Commission on Atomic Weights and Isotopic Abundances
Commission on Nomenclature of Inorganic Chemistry
Commission on High Temperatures and Refractory Materials

Inorganic Chemistry Division Committee

(MEETINGS OF 25 and 30 AUGUST 1981)

1. The Report of the Division President to Council (see also this issue) was approved. Professor Greenwood emphasized the value of individual discussions with IUPAC officers.

2. Sponsorship has been given to the following Conferences since the Davos meeting:
   International Conference on Harmonization of pH Scale Recommendations, Lisbon, June 1980
   7th International Conference on Nonaqueous Solutions, Regensburg, August 1980
   6th International Conference on Crystal Growth, Moscow, September 1980
   International Symposium on Synthesis and Properties of New Elements, Dubna, September, 1980
   International Conference on Phosphorus Chemistry, Durham USA, June 1981
   International Conference on Chemistry of Materials at High Temperatures, Harwell UK, September 1981
   6th International Symposium on Solute-Solute-Solvent Interactions, Minoo Japan, July 1982
   8th International Conference on Nonaqueous Solutions, Nantes, July 1981
   XXII International Conference on Coordination Chemistry, Budapest, August 1982

3. Professor Greenwood reported on the Executive Meetings of the Division Officers in Toulouse and Leeds, with particular emphasis on the discussions of future activities of the Division.

4. The Committee approved the Reports of its three Commissions and the proposed budget.
   Commission II.1 (i) Change of the atomic weight of hydrogen, silver and lutetium to indicate increased precision; (ii) preparation and review of Tables of Atomic Weights to four and five significant figures; (iii) monitoring the literature of atomic abundances of elements from non-terrestrial sources; (iv) preparation of a detailed element by element table of the isotopic composition of the elements by the Sub-Committee on the Assessment of Isotopic Compositions.
   Commission II.2 Preparation of a new edition of the "Red Book", which is divided into two parts. Part I is the revision of the nomenclature of ordinary inorganic compounds and Part II involves new nomenclature, including isotopically modified compounds, nitrogen hydrides, inorganic and coordination polymers, polyanions, stereochemical nomenclature, ring and chain compounds, boron compounds and non-stoichiometric compounds.
   Commission II.3 (i) studies on melting temperature of refractory materials; (ii) secondary temperature standard; (iii) critical evaluation of thermodynamic properties of alkali metals, which will be published in Pure and Applied Chemistry; (iv) carbon and graphite characterization; (v) solid state electrolytes; (vi) silicon carbide and nitride; (vii) bibliography and data bank of thermodynamics.

5. The Committee approved the election to the Division Committee and of the Titular and Associate Members of the Commission. The number of Titular Members was decreased by two except for Commission II.2, which had already been exempted from reduction by the Bureau. Professor Kazuo Saito was elected Vice-President and President Elect and Professor Ekkehard Fluck was elected Secretary of the Division for four years.

6. Amendment of the Rules of the Inorganic Chemistry Division: Article 4d of the Rules was slightly modified to make the meaning clearer. The proposal was sent to Bureau.

7. Change of the Name of Commission II.3: Because of the enlarged activity of Commission II.3, a name change was proposed to the bureau; old name, Commission on High Temperatures and Refractory Materials; new name, Commission on High Temperature and Solid State Chemistry.

8. The future activity of the Division was discussed at considerable length: (i) It was reaffirmed that the Division does not support the establishment of a Commission of Nuclear and Radiochemistry or a Commission on Radiation Chemistry. (ii) The Division supported the establishment of a Commission on Chemical Kinetics proposed by the Physical Chemistry Division, but it preferred to make it a joint Commission or to be asked to appoint one or two members of the new Commission. (iii) Enlargement of the activity of the Commission II.3 to cover a wider range in solid state chemistry was encouraged. (iv) Continued attention to the activities of CODATA, SCOPE and CHEMRAWN was recommended.

9. Professor Greenwood thanked the members, particularly the Officers and those retiring, at the end of this General Assembly.

II.1 Commission on Atomic Weights and Isotopic Abundances

(MEETINGS OF 25 AUGUST - 2 SEPTEMBER 1981)

The Commission met in Leuven with Dr. N.E. Holden in the Chair.

There were present: Professor R.C. Barber, Dr. I.L. Barnes, Professor P. De Bievre, Dr. R. Hagemann, Dr. N.E. Holden, Professor W.H. Johnson, Professor R.L. Martin, Mr. T.J. Murphy (Titular Members) and Dr. A.E. Cameron, Professor N.N. Greenwood, Dr. J.R. De Laeter, Dr. H.S. Peiser (Associate Members). Dr. M. Shima and Dr. St.E. Diamond attended the meeting as observers, the latter following his selection by the United States National Committee for a IUPAC award.

Three changes in atomic weight values and uncertainties were recommended and are as follows:

Hydrogen	from	1.0079	± 1	to	1.00794 ± 7
Silver	from	107.868	± 1	to	107.8682 ± 3
Lutetium	from	174.967	± 3	to	174.967 ± 1

These changes resulted from a detailed element by element review performed by the Commission's Sub-Committee for the Assessment of Isotopic Composition (SAIC).

The Commission directed SAIC to prepare, and present for adoption at the 32nd IUPAC General Assembly, revised atomic weight tables and tables of isotopic compositions of the elements. The Commission proposes to publish these tables separately commencing in 1981 to encourage a wider awareness of the data on isotopic abundances of the elements. The Commission has also recommended that the SAIC element by element review should be published separately following its completion and presentation to the Commission in August 1983.

The Commission has prepared a new Table of Atomic Weights to Five Significant Figures (scaled to the relative atomic mass of $^{12}C = 12$) for publication in its 1981 Report. This new table complements the definitive Table of Atomic Weights but, unlike the latter, should rarely require changes in the tabulated data. The Commission has also agreed to review the Table of Atomic Weights to Four Significant Figures at the request of the Committee on the Teaching of Chemistry.

The Commission has continued to monitor the literature for data on atomic weights, atomic masses and isotopic abundances for terrestrial and non-terrestrial materials, and for new methods and techniques of measurement.

It was with deep regret that members of the Commission learnt that its senior member, Dr. A.E. Cameron had died a few weeks after attending the meeting. Gus Cameron, between 1959 and 1961, undertook the massive review and evaluation of mass spectrometric data and recalculation of the corresponding atomic weights for all elements on the occasion of the change in atomic mass scale from oxygen = 16 to $^{12}C = 12$. After 22 years of service, his presence and advice will be sorely missed by the Commission.

The next meeting of the Commission will take place during the 32nd IUPAC General Assembly which will be held at Lyngby, Copenhagen from 18 to 26 August 1983.

II.2 Commission on Nomenclature of Inorganic Chemistry

(Meeting: 17 – 19 August 1981)

Present: Prof. J. Chatt (Chairman); Prof. Y. Jeannin (Vice-Chairman); Dr. T. D. Coyle (Secretary); Prof. D. H. Busch; Prof. E. Fluck, Dr. P. Fodor-Csányi, Dr. G. J. Leigh, Prof. J. Veprek (Titular Members); Dr. K. Ch. Buschbeck, Mr. E. W. Godly, Prof. K. P. [illegible], Dr. I. Samuel, Mr. T. E. Sloan (Associate Members); Prof. L. F. Bertollo, Dr. S. [illegible]son, Prof. K. Yamasaki (National Representatives); Dr. M. W. G. de Bolster, Prof. M. Herman, Dr. J. J. Jennen, Dr. R. Laitinen, Dr. W. Schubert, Prof. [illegible] (Observers)

1. Changes of Membership

Prof. Chatt retired as Chairman and as a Titular Member. Prof. Jeannin and Dr. Leigh were elected for renomination as Titular Members. Dr. Samuel was elected for nomination as a Titular Member. Prof. Jeannin and Prof. Busch were elected as Chairman and Vice-Chairman, respectively. Prof. [illegible], Dr. R. Laitinen, Prof. R. C. Mehrotra, Dr. J. F. Nixon, and Dr. K. Samuelson were elected for nomination as Associate Members as replacements for Dr. Samuel and for the following retiring members: Prof. Adams, Prof. Jensen, Prof. Klikorka, and Prof. Schubert.

2. Revision of the Inorganic Nomenclature Rules

The Commission's current plans for revision of the present Red Book envisage a ten-chapter volume (Part I) covering basic aspects of inorganic nomenclature and a continuing series (Part II) of reports on specialized nomenclature subjects.

Substantial progress has been realized on the Part I project. Advanced drafts of five of the ten chapters, comprising the most basic aspects of the revision, were reviewed. These documents will be substantially finished within the next year. Drafts of four other, more specialized, chapters were reviewed and recommendations for revisions were agreed upon. These should be completed by the next meeting. Arrangements for a working party for the remaining chapter (on solid state chemistry) were established.

3. Other Activities

The final version of recommendations for Nomenclature of Isotopically Modified Compounds has been transmitted to the Secretariat for publication. This is the first completed chapter of Part II of the revised Red Book. A joint (with the Commission on Macromolecular Nomenclature) document on Nomenclature for Regular Single-Strand and Quasi-Single-Strand Inorganic and Coordination Polymers has been submitted to the Secretariat for publication as provisional recommendations. A document on Nomenclature of Polyanions, which will be included in Part II of the revised Red Book is in final stages of preparation. The final version of rules for Nomenclature of Hydrides of Nitrogren and Derived Cations, Anions, and Ligands was approved by the Commission and will be submitted for publication early in 1982.

4. Next Meeting

Subject to confirmation of final arrangements, the next meeting will be held in Veszprem, Hungary, from 29 August–2 September 1982.

II.3 Commission on High Temperatures and Refractory Materials

(MEETINGS OF 26 - 29 AUGUST 1981)

MELTING TEMPERATURES (1) Hlavac reported that the first part of the study of melting points of oxides has been submitted to P.A.C. (2) The second part, on lanthanide oxides, has been edited, will be circulated within the Commission, and will be submitted to P.A.C. (3) Seven participants have been provided with samples of well-characterized HfO_2 for collaborative melting point measurements; in addition, samples of pure $CaCO_3$ will be distributed so that melting point measurements on CaO can be made.

SECONDARY TEMPERATURE STANDARDS (Carbide-Carbon systems) (Komarek) The CSG has met in Reutte, June 1981, and has suggested six systems for a collaborative study of eutectic and transformation temperatures in the range 1900-3600 K, thus overlapping the oxide melting points. Procurement of raw materials and the preparation and characterization of samples has been arranged.

ALKALI METAL HANDBOOK (Ohse). Sixty-two authors have been selected and the outline of the book was presented. The first drafts of the nine chapters in 50 sections are expected by June 1982. A report on critically evaluated thermodynamic quantities for the alkali metals will be circulated to the Commission for approval for publication in P.A.C.at the next meeting.

CARBON AND GRAPHITE CHARACTERIZATION AND TERMINOLOGY (Fitzer) The subcommittee plans to prepare a list of about fifty defined terms for consideration by the Commission at its next meeting for publication in P.A.C.

SOLID STATE ELECTROLYTES (Anthony). Eleven laboratories have submitted results which will be evaluated. A report will critically discuss possible errors in the use of zirconia-based electrolytes in oxygen gauges, and it will be submitted to the Commission for publication in P.A.C.

SILICON CARBIDE AND SILICON NITRIDE (Sersale, Petzow). Under consideration is the preparation of a final report for P.A.C. on the characterization of powders which was the initial phase in this activity. A new project for the industrially important "sialons" will begin by a critical compilation of their properties through a world-wide cooperative activity.

THE BIBLIOGRAPHY (Hocking, De Maria). A modest advertising effort and an increase in the subscription price have resulted in a favorable financial outlook. The number of subscriptions is now 190.

THERMOCHEMICAL DATA BANK (Alcock). Publication of the first set of tables, although complete, will be delayed, until more experience is gained in recruiting qualified scientists for choosing values.

CHANGE OF NAME. The Commission decided (with one abstention) to recommend that its enlarged role be recognized by changing its name to High Temperature and Solid State Chemistry.

HARWELL CONFERENCE (Rand). A Commission-sponsored conference on the Chemistry of Materials at High Temperature will be held at Harwell,U.K. week after next Sept.7-10. The next one is tentatively scheduled three years hence in 1984 at one of several proposed sites.

SHORTER MATTERS. Participation in a joint working party with II.2 on nonstoiechiometry is planned. Appendix IV of the Green Book is ready for publication. Activity on the vapor pressure project is discontinued. Cooperation with II.2 is sought on glasses. Two watching briefs are maintained on pyrometry book and on work functions.

NEW PROJECTS. Note one above on sialons. Note one above on nonstoiechiometry nomenclature. Another is to prepare a report on the Commission's experience with collaborative projects and its recommendations for guidelines. Another is to prepare a report on the need for a critical assessment of data for use in High Temperature mass spectrometry. Another is to perform a critical assessment of thermodynamic data used for oxygen potentials in high temperature solid state emf.studies. Yet another is to investigate the availability of a bibliography on lithium, lithium compounds and alloys, and especially the solubility of hydrogen in them.

ELECTIONS . TM's Anthony, Gilles and Komarek were reelected for four years, and Hlavac for two years. AM's Fitzer, Ohse, Sata and Sersale were reelected for four years, Drowart and Hastie were elected for four years and Mrowec and Worrell reelected for two years. Komarek and Gilles were reelected chairman and secretary,respectively. National representatives reaccepted were El-Sewefy, Grieveson, Magnéli, Ristič, Rosenblatt and Yen; and newly accepted were Corish, Matousek and Saha.

ATTENDANCE. TM's Anthony, De Maria, Gilles (secy) Gurvich, Hlavac, Komarek (Chairman), Petzow and Rand. AM's Alcock, Fitzer, Horton, Metselaar, Ohse and Sata. NR's Drowart and Yen. Observers Corish and Gysling. Visitors Somiya and Weiss.

NEXT MEETING : Baden-Baden, FRG, 1982, October 1,2

III. ORGANIC CHEMISTRY DIVISION

Commission on Nomenclature of Organic Chemistry
Commission on Physical Organic Chemistry
Commission on Photochemistry
Commission on Medicinal Chemistry

Organic Chemistry Division Committee

(MEETINGS OF 25 - 29 AUGUST 1981)

The results of the election of Division Officers and the complete list of the candidates for filling the vacancies in the Committee were presented to the Commission Chairman.

The titular membership will be reduced to 6 with the exception of Commission III-1 which may remain its actual composition of 8 members. The Chairmen of Commission III-1, III-2 and III-3 agreed with the proposal.

Concerning some problems arising from the participation of national representatives into commission works, it was agreed that national representatives will have a statute of "observer" unless they take active part in working party activities.

The Division is in favour to have the working party members listed in the IUPAC official documents; to this aim, the Commission Chairmen are requested to provide the complete list of working party members to the Division President.

The allocation of funds for 1979-1981 arranged by the President was approved. The Commissions are requested to present the proposals for the 1982-1983 budget by the end of the General Assembly.

The Chairmen of Commissions III-1, III-2 and III-3 have reported on the activities of their Commissions.

Division Symposia

Chemistry of Natural Products

- The 13th Symposium will be held in Pretoria (South Africa) on August 2-7, 1982 (Pr. Bulls)
- Two applications were presented for the 14th Symposium to be held on 1984:

  Poznan/Poland, organized by Pr. M. Weiwiorski

  the Hague/Netherlands, organized by Pr. U.R. Pandit

  As both applications fulfill the IUPAC requirements and as the Committee had already taken in high consideration the Polish application for the 13th Symposium at the preceding meeting in Davos (1979) the Committee decided:

  to endorse the 14th Symposium in Poznan (Poland) at the care of Pr. Weiwiorski,

  to accept the application of Pr. Pandit for the 15th Symposium in 1986 in Netherlands, with some modifications if they are needed.
- The Japanese proposal for 1988 was favourably considered.

Physical Organic Chemistry

- The 6th Symposium will be held in Louvain-la-Neuve (Belgium) under the chairmanship of Pr. Bruylants.
- The Committee agrees to sponsor the 7th Symposium in Auckland (New Zealand) in 1984 (Pr. De La Mare) and the 8th Symposium in Tokyo, in 1986 (Pr. Oki).

Organic Synthesis

- The 4th Symposium will be held in Tokyo, Japan, on August 22-27, 1982
- The Committee is ready to accept that the 5th Symposium will be held in BDR, likely Freiburg (Pr. Prinzbach).
- Pr. Beletskaya was asked to inquire on the possiblity to hold the 6th Symposium in USSR in 1986.

Photochemistry

The organizers of the 1982 Symposium on Photochemistry (Pau. France) asked sponsorship very late. The President will inquire about next program.

- CHEMRAWN-III Second World Conference on Future Sources of Organic Raw Materials.

Other planned meetings

- CHEMRAWN-IV (Chemical Sources of the Ocean) - 1984
- CHEMRAWN-V (Chemical Basis of Carcinogenesis) - 1985
- CHEMRAWN-VI (Chemistry and Technology of Water and Waste Water) - 1986

A number of suggestions for further CHEMRAWN meetings were brought forward and briefly discussed (solar energy conversion; population and fertility control functional materials; and some others).

Commission III-3

Pr. De Schryver reports on the progress of the work done at the meeting and in particular for the endorsement for the publication of "recommended standards for reporting photochemical data" and for the start of the following new projects:

a) Compilation of Excited State Quantities (A.A. Lamola)

b) Fluorescence Data (E.D. Eaton, the published book does not overlap with such a project).

The Committee accepted the proposals.

Commission III-4

Dr. Cavalla, also on behalf of Pr. Nauta who attends the session, reports on the activity of Commission III-4. He states that the Commission III-4 accepts the "revised proposal" of the Executive Committee because the action will clarify the position of Medicinal Chemistry inside IUPAC.

Dr. Cavalla, on the name of the Commission, proposes either Pr. Nauta or himself as Member of the Study Group that will study the problems of objectives and projects of Commission III-4.

Following the proposal of the Executive Committee no new Members are proposed for nomination and the membership of the Commission will remain unchanged, apart the leave of those who have completed their term. For all those who are entitled the membership is requested to be extended for two years.

III.1 Commission on Nomenclature of Organic Chemistry

(MEETINGS OF 21 - 26 AUGUST 1981)

1. Attendance: TITULAR MEMBERS: J. Rigaudy (Chairman), G. P. Moss (Vice-Chairman), W. H. Powell (Secretary), O. Achmatowicz, D. Hellwinkel, A. D. McNaught, J. C. Richer. ASSOCIATE MEMBERS: D. R. Eckroth, E. W. Godly (in part), N. Lozac'h, R. Panico, P. A. S. Smith, O. Weissbach. OBSERVERS AND GUESTS (in part): H. J. T. Bos (Netherlands), J. R. Bull (South Africa), K. L. Loening (USA), L. Maat (Netherlands), P. Mackiewicz (France), P. Woodgate (New Zealand).

2. Nomenclature of Organic Chemistry, 1979 edition (Sections A, B, C, D, E, F, and H) is available from Pergamon in an inexpensive soft-cover edition provided that an individual's organization has purchased the hard-cover edition.

3. Revision of the 1979 edition of the Nomenclature of Organic Chemistry is primarily a reorganization of the current rules; however, simplifications will be introduced where possible and extensions added where necessary. The proposed outline of subsections is as follows: R-0 Preamble and Introduction; R-1 General Principles; R-2 Parent Hydrides (includes natural product parent hydrides); R-3 Functional Groups (including unsaturation/saturation, ions, and radicals), Functional Parent Compounds and their Derivatives; R-4 Name Construction; R-5 Stereochemical Nomenclature; R-6 Isotopically Modified Compounds; R-7 Name Selection. The revision will more clearly recognize the need for two levels of nomenclature rules: (1) a need for some flexibility in the rules yielding unambiguous, but not necessarily unique names; and (2) a need for rigorous rules that will yield unique names, i.e., one and only one name for each structure.

Preliminary drafts for Subsections R-1 and much of R-2 have been prepared and work on Subsections R-3 and R-4 is in progress. Various alternatives for Subsection R-7 are being evaluated.

Concurrently with the revision of the 1979 edition, several subjects are being reviewed and revised or extended as needed. These include the following:

3a: Hantzsch-Widman System: a revision of this system for naming heteromonocycles (Section B) is ready to be submitted for review by IDCNS before publication as approved IUPAC recommendations.

3b: λ-Convention: an explanation of this method for designating nonstandard valence states of skeletal atoms in parent hydrides (introduced in Section D) has been approved for publication as provisional recommendations.

3c: Radicals and Ions: a comprehensive documentation of the methods given in Section C for naming radicals, ions, and radical ions, including their application to zwitterionic compounds and polyradicals or polyionic compounds.

3d: Fusion Nomenclature: a comprehensive documentation of this system for naming polycyclic ring systems extending the basic principles given in Sections A and B.

3e: Stereochemical Nomenclature: a general revision and extension of Section E.

3f: Oxo Acids: a general review of principles for naming organic acids and organic derivatives of inorganic acids.

3g: Indicated Hydrogen: a detailed study of this method for distinguishing isomers of fused ring systems and their derivatives as outlined in Sections A, B, and C.

3h: Natural Products: a general revision and extension of Section F.

4. Other subjects under study by the Commission include: Nomenclature for Cyclophanes: Delocalized Ions; Fused Ring Systems with Cumulative Double Bonds; Numerical Prefixes Beyond 200; and Class Names.

5. Joint meetings with Commission II.2 (Inorganic Nomenclature) and Commission III.2 (Physical Organic Chemistry) were held in which topics of mutual interest were discussed.

6. Membership: The following changes were recommended to the Bureau: TITULAR: Prof. Panico to replace the retiring Chairman, Prof. Rigaudy; ASSOCIATE: Prof. Rigaudy and Mr. Schoenfeld to replace the retiring Dr. Cross and Prof. Panico who was recommended for Titular Membership; OFFICERS: Dr. G. P. Moss was elected Chairman and Prof. D. Hellwinkel was elected Vice-Chairman.

The Commission accepted Prof. H. J. T. Bos (Netherlands) and Prof. G. L'Abbe (Belgium) as National Representatives.

7. The next meeting of Commission III.1 is planned for August 24-30, 1982, in Heidelberg, Federal Republic of Germany.

III.2 Commission on Physical Organic Chemistry
(MEETINGS OF 26 - 29 AUGUST 1981)

Professor J. F. Bunnett in the chair.

1. *Glossary of terms used in physical organic chemistry.* Professor V. Gold FRS described the work done on the glossary since its provisional publication. The Commission authorised Professor Gold to proceed with the definitive version. Revisions will be needed every 2 - 3 years. Professor I. P. Beletskaya attended a meeting of the Commission to discuss problems in translating the glossary into Russian.

2. *Symbolising reaction mechanisms.* The Commission is developing two systems: a full system capable of giving a complete linear representation of a mechanistic pathway, and an abbreviated system to replace the obsolescent Ingold symbolism. The working parties of Dr. J. S. Littler and Professor R. D. Guthrie are now working together to ensure that, as far as possible, the two systems are compatible.

3. *The naming of straightforward transformations* (Professor J. F. Bunnett) and *the naming of multivalent transformations* (Dr. R. A. Y. Jones). The rules devised by these two working parties will be drawn together. Detailed discussions were deferred to 1982 after the period for comment on the provisional rules for straightforward transformations has elapsed.

4. *The naming of coupling and decoupling transformations and of attachment and detachment transformations* (Working party chairman, Professor M. P. Doyle; report presented by Dr. R. M. Kellogg). *The naming of ring opening and closing transformations* (Professor P. Müller). *The naming of complex transformations* (Professor J. March). In all these areas work is continuing and is reaching an advanced stage.

5. *New activities.* Professor J. Toullec will chair a working party on extrusion and insertion transformations. Dr. R. A. Y. Jones will prepare a discussion paper on naming rearrangements. Professor V. Gold will chair a working party on stereochemical nomenclature in which III.1 will participate. III.2 will be represented on a III.1 working party on naming classes of organic compounds.

6. *New members.* Professor E. A. Halevi, Professor W. P. Jencks, Dr. R. A. Y. Jones (Secretary) and Professor O. Nefedov were recommended as Titular Members. Professor V. Gold, Dr. J. Penton and Professor J. Toullec (all retiring Titular Members) and Professor P. Müller were elected Associate Members.

7. The Commission also held a joint meeting with Commission III.1 to discuss matters of common interest.

III.3 Commission on Photochemistry

(MEETINGS OF 26 - 28 AUGUST 1981)

Attendance

Prof. K. Schaffner, Chairman; Prof. F.C. De Schryver, Secretary; Prof. K.N. Houk, TM; Dr. A.A. Lamola, TM; Prof. K. Tokumaru, TM; Prof. C. Sandorfy, AM; Dr. D.F. Eaton, Observer; Prof. F. Diomedi Camassei, Observer. Prof. G.L. Geoffrey

Next Meeting

July 1982 in Pau, France, during the IUPAC symposium on Photochemistry.

1. Membership changes

Prof. F.C. De Schryver (TM 1975-1983) shall serve as a Chairman, and Dr. A.A. Lamola (TM 1973-1981) as a Secretary. Prof. J. Michl (AM 1977-1981) is proposed as TM. Prof. K. Schaffner is thanked for his excellent service as Chairman (1971-1981).

Dr. F.D. Eaton (USA) and Professors S.E. Braslavsky (FRG), V.A. Kuzmin (USSR) and F. Wilkinson (UK) are proposed as new AM's.

2. A draft of the project on "Recommended Standards for Reporting Photochemical Data" (coordinators : Lamola, Wrighton) was finalized.

3. The preparation of the "Glossary of Terms Used in Photochemistry" (coordinators : Eaton, Grabowsky, Houk, Sandorfy) was continued, in particular considering comments and suggestions from numerous experts.

4. The Commission agreed that in the project on "Teaching of Photochemistry" (coordinators : De Schryver, Tokumaru, Geoffroy) preference should be given to develop guidance papers on selected topics for inclusion in undergraduate courses.

5. It was concluded that the project on "Fluorescense Standards" (coordinators : Braslavsky, Wrighton, Eaton, Michl) should be reactivated.

6. The Commission decided to initiate a new project on the "Compilation of Data on Excited State Properties" (coordinators : Lamola, Eaton, Tokumaru, Diomedi Camassei).

III.4 Commission on Medicinal Chemistry

(MEETINGS OF 28 - 29 AUGUST 1981)

Prof. dr. H. Timmerman

Vrije Universiteit, Vakgroep Farmacochemie, De Boelelaan 1083, 1081 HV AMSTERDAM
The Netherlands

1) Attendance by the titular members (Cavalla (chairman), Nauta (secretary), Humber, Kobayashi, Mutschler, Timmerman and Wermuth; Mutschler had to be absent on August 29th. Associate members Casagrande and Glushkov (the latter on August 29 only). Absent with notice : titular member Portoghese (coincidence A.C.S. meeting), Clarke, Dahlbom and Serafin (no funds).

2) All attendants but Wermuth and Glushkov had been present at an unofficial pre-meeting at the occasion of the IInd- Noordwijkerhout IUPAC-IUPHAR meeting, held in the Netherlands on the days preceding the Leuven assembly.

3) Due to a "critical appraisal" of IUPAC Executive Committee members on projects and activities of commission III-4, which led to conclusion the commission should work below standard, the meeting was dominated by the proposal (of the organic chemistry division) to suspend the activities of the commission for the next coming two years.

4) During the Leuven meeting the proposal of the organic chemistry division (see 3) was changed in such a way that the activities of the commission could be continued, under strict rules however, in which was included the formation of a "commission of three (one member of O.C. division, one member of commission III-4, one external 'wise' man) which should define the objectives of the commission. Existing activities would be continued and/or finished; there would be no funds available for the commission (no meetings).

   The commission, which had already defended its position in a letter of the chairman and the secretary to the president of the organic chemistry division could do nothing but awaiting the first results of the work of the commission of three, in which commission Cavalla is its representative.

5) Remaining time available in Leuven was mainly used for :
   - Report from W.P. on education A (sequel to the chemical report 13). The scope of the field of medicinal chemistry taken as a starting point it was concluded that the W.P.'s report should contain :
     . new definition of medicinal chemistry;
     . proposal for tentative teaching programme(s);
     . review of actual teaching programmes in the field.
   - Report from W.P. on education B (assistance in developing countries). Timmerman informed on efforts to start a training programme in medicinal chemistry in Indonesia.
   - Newsletter;
     The activities, under the editor Clarke, should be strongly promoted.
   - Symposia in which Commission III-4 is involved :
     . North American Medicinal Chemistry Symposium, Toronto, Canada June 10-14, 1981
     . VIIIth International Symposium on Medicinal Chemistry, Uppsala Sweden, August 28-31,'81

   and especially :
   - a tentative list of projects of Commission III-4 for consideration of "commission of three" which was given to Cavalla; this list is not dramatically different from that compiling the activities sofar.

6) Commission membership
   Titular members - The commission is allowed to have six titular members. In Leuven the commission had still eight titular members, of which Humber had used the maximum term of eight years. An election in writing resulted in reelection of Cavalla, Nauta, Mutschler and Portoghese; Kobayashi was not reelected. For the next two years Nauta was elected chairman, Timmerman secretary.
   Associate members - Election of new associate members was not allowed (reduction in number since Davos); reelection was possible and made. Our request to appoint Kobayashi as associate member - at no costs for IUPAC - was refused by the Organic Chemistry division.

7) New meeting
   Under the existing circumstances - no funds available - it was not appropriate to announce a new meeting of the commission.

IV. MACROMOLECULAR DIVISION

Commission on Macromolecular Nomenclature
Commission on Polymer Characterization and Properties

Macromolecular Nomenclature Division Committee
(MEETINGS OF 29 - 30 AUGUST 1981)

Present : V. Kabanov (President), C.H. Bamford (Vice-President), A.J. de Vries (Secretary); H. Höcker, Z. Jedlinski, M. Mandel, T. Saegusa, J.K. Stille, Ph. Teyssié (Members) ; D. Heinze, A. Nakajima, D.C. Pepper, R.C. Schulz, F. Tüdös (Coopted Members) ; A.D. Jenkins, N.M. Bikales, I.M. Papissov (Commission IV-1) ; J.W. Barrett, H. Benoit (Commission IV-2) ; G. Challa, V. Dobrescu, M. Farina, E. Goethals, B. Phillip, P. Sigwalt (Nat. Represent.) ; G.W. Becker (IUPAP-Represent.) ; in part : C.G. Overberger, J.G. Fatou.

1. Minutes of the meetings held in Davos (1979) and Florence (1980) were approved.

2. Current status of IUPAC sponsored symposia :

IUPAC sponsorship was approved or confirmed for the following symposia :

1982 : - 28th International Symposium on Macromolecules, Amherst, MA, U.S.A., 12-16 July,

- 23rd Prague Microsymposium on "Selective Polymer Sorbents", Prague, 19-22 July,

- International Symposium on "Interrelations between Processing, Structure and Properties of Polymeric Materials", Athens, Greece, 29 Aug.-2 Sept.

1983 : - 29th International Symposium on Macromolecules, Bucharest, Romania, 5-9 sept.

- 24th Prague Microsymposium on "Copolymers, Structure and Solution Properties", Prague, 11-14 July.

- 25th Prague Microsymposium on "Processing and Long-Term Stabilities of Hydrocarbon Polymers", Prague, 18-21 July.

1984 : - International Symposium on "Characterization and Analysis of Polymers", to be held in either Melbourne or Sydney, Australia during the first week of September.

- International Symposium on "Polymerization fo Small Heterocycles and Aldehydes", Jablonna or Krakow, Poland. (this symposium was originally planned for 1982).

1985 : A proposal by Prof. Mandel to hold the 30th International Symposium on Macromolecules in the Netherlands (sept. 1985) was provisionally approved.

Finally it was reminded that the European Physical Society would hold two symposia in 1982 on the following subjects :

- Polymer Alloys, in Louvain-la Neuve (24-26 May 1982), and

- Polymer Crystals (Structure and Morphology), in Barcelona (21-24 Sept. 1982)

3. Education and Training in Polymer Science and Technology

After some discussion it was agreed that it would not be useful now to prepare an up-dated version of Dr. Sheldon's survey. It was proposed by several members, however, that the Division should try to define minimum requirements in the field of education and training on which general recommandations might be based. It was decided to examine first the documents prepared by the Polymer Division of ACS and the U.S. National Research Council and to get in touch with the Committee on Teaching of Chemistry concerning possible future actions by IUPAC.

4. Relations with other organisations

Collaboration between ISO (TC 61) and Commission IV-1 was reported to be relatively good. In order to establish better collaboration with Commission IV-2, it was proposed to invite ISO to supply an observer to the next meeting of IV-2. Relations with ACS (Polymer Division) and IUPAP were excellent, but relations with IUPAB were practically non-existent. It was suggested to invite IUPAB to nominate another representative willing to attend Macromolecular Division meetings regularly.

5. Nomination of National Representatives

Recent nominations were approved but it was judged useful to inform all N.R.'s about their duties and to invite them in particular to disseminate in their countries the maximum amount of information on the Macromolecular Division's activities.

6- a) Commission IV-1 : Prof. JENKINS presented a report on the activities of IV-1 since 1979. Two publications had been prepared for PAC and a third one was expected to be ready for submission before the end of 1981. Useful progress had been made in other projects. Dr. SUTER (Switzerland) was proposed as a new Titular Member in replacement of Dr. RING ; three new Associate Members were proposed : Profs. M. RINAUDO (France), L. SUNDELOF (Sweden) and D. BRAUN (F.R.G.).

b) Commission IV-2 : A report on the activities of IV-2 was presented by Dr. BARRETT. Four reports of Working Party 1 had been published in PAC since May 1980 and three others would be submitted before the end of 1981. During the same period three reports of Working Party 3 were published in various journals. Two new sub-groups were created in Working Party 2 and useful progress was reported for the projects in Working Parties 4 and 5. Pr. DULOG, chairman of Working Party 3, was elected Titular Member ; Dr. CLEGG, chairman of Working Party 1 was elected chairman of Commission IV-2, in replacement of Dr. BARRETT who accepted to become Associate Member. Prof. KABANOV was also elected as Associate Member. All other Titular and Associate Members were re-elected for another two years.

The reports of both Commissions IV-1 and IV-2 were unanimously approved by the Division as well as continuation of activities as planned.

7. Membership changes : For the coming four years Prof. BAMFORD was elected President, Prof. SAEGUSA Vice-President, Prof. MANDEL Secretary and Prof. PLATE Titular Member. Since the number of Titular Members was reduced to eight, it was decided to ask the Bureau to approve an increase of the number of Coopted Members and a corresponding change of Rule 2 which would read now as follows : "The Division is administered by a Division Committee consisting of Full and Coopted Members whose total number should not exceed twenty". In accordance with the proposed change, ten new Coopted Members were elected : Profs. KABANOV and JEDLINSKI (for two years) and Profs. CHALLA, HEITZ, ISE, PHILLIP, SILBERBERG, SIMIONESCU and Drs. CARREGA and LANGE (for four years).

8. Use of word processors : A motion proposed by Prof. JENKINS was voted, asking for maximum use of word-processing techniques in the drafting and publication of future IUPAC-documents.

9. It was agreed that an informal meeting of the Division Committee would be held during the Amherst-Symposium (July 1982).

10. A vote of thanks to the outgoing President and Secretary closed the meeting.

IV.1 Commission on Macromolecular Nomenclature

(MEETINGS OF 26 - 29 AUGUST 1981)

Present were: Titular Members Drs. Jenkins (Brighton, Chairman), Bikales (Washington, Secretary), Allegra (Milano), Kratochvil (Prague), Mita (Tokyo), Ring (Marl), Papisov (Moscow), and Sigwalt (Paris); Associate Members Drs. Loening (Columbus) and Wetton (Loughborough, present on 28 August); National Representative Dr. Hu (Beijing); Observers during part of the meeting, Drs. Bamford (Liverpool), Challa (Groningen), Farina (Milano), Jedlinski (Zabre), Kabanov (Moscow), Mandel (Leiden), Philipp (Teltow), and Van Beylen (Leuven).

The revised document on Stereochemical Definitions and Notations Relating to Polymers (Recommendations 1980) was published in Pure and Applied Chem., 53, 733-752 (1981). It will appear shortly in French, Russian, Italian, and Japanese. Work was also completed on our draft document on Nomenclature for Regular Single-Strand and Quasi Single-Strand Inorganic and Coordination Polymers. The Report is expected to appear in Pure and Applied Chemistry as a joint document of this Commission and the Commission on Inorganic Nomenclature.

A major effort was made to complete the discussion of all remaining questions dealing with the latest version of the draft document on Nomenclature of Copolymers. A working party has been appointed to prepare the document for publication. This is expected to take place in 1982.

A joint meeting was held with Commissions I.1 and I.6 on 27 August 1981 to discuss serious problems for polymer scientists with the current (1979 edition) IUPAC terminology "relative molecular mass", "molar mass", etc. These problems could be greatly alleviated if molecular weight were once again permitted as an alternative to the current systematic name. The problem of viscosity nomenclature (intrinsic viscosity, limiting viscosity number, etc.) was also discussed with particular attention to the 1979 document of Commission I.6 which reaffirmed the present usage of these terms. Commission IV.1 adopted the following resolutions: (1) To urge the reintroduction of "molecular weight" as a permitted alternative term for "relative molecular mass"; (2) Not to oppose the proposal for the name dalton (Da) as an alternative for atomic mass unit. The Commission noted that the dalton has seen virtually no use in the polymer field. A joint meeting was also held with Commission IV.2 on 28 August 1981 to discuss future collaboration.

The Commission discussed the proposed Definitions of Physico-Chemical Terms Related to Polymers, the proposed Definitions of Chemical Terms Related to Polymers, and the document on Classification of Polymers. Finally, the Commission decided to seek publication of a bound volume on polymer nomenclature.

The next meeting of the Commission will take place from 17-20 July 1982 at Amherst, Massachusetts, USA.

IV.2 Commission on Polymer Characterization and Properties

(MEETINGS OF 27 - 28 AUGUST 1981)

Present:	Titular Members:-	J.W.Barrett (Chairman), R.E.Wetton (Secretary), P.L.Clegg G.Eastmond, G.Hinrichsen, Th.G.Scholte.
	Nominated Titular Members:-	L. Dulog
	Associate:-	C.H.Bamford, G.W.Becker, H.H.Meyer, A.J.de Vries
	National Representatives:-	T.Kelen (Hungary), R.Qian (China)
	Divisional Observers:-	D.Heinze, Z.Jedlinski, M.Mandel, B.Philipp, A.Nakajima, F.Tüdös
	Observers:-	V.Dobrescu (Rumania), G.S.Harrison (South Africa) S.J.Valenty (U.S.A.)
	Ex officio:-	V.Kabanov
	Apologies from:-	G.Allen, H.Benoit, D.Clark.

1. Introductory Remarks and Membership. Prof. Kabanov announced that the review of commission IV.2 had been very complimentary and agreement had been given to the request for 8 Titular members.

2. The minutes of the 5th Meeting, Oxford, 1980, were approved.

3. Reports from existing working parties

I. Structure and Properties of Commercial Polymers. P.L.Clegg reported that the main working party was still running in two largely parallel groups. The mechanical properties group met on 26th and 27th March 1981 in Paris-Courbevoie and the rheology group met in Parkersburg (U.S.A.) on 11th and 12th May 1981. Membership of these groups has increased to a total of 33.

A new sub-group has been started in East Asia under the Chairmanship of Prof.Nakajima of Kyoto, Japan. Attempts to start an Eastern European sub-group are now making some progress and it is expected to start operation in 1982 under the chairmanship of Dr.Plochocki, Warsaw.

The Rheology sub-group in the U.S.A. under Prof.Lodge had submitted its final report entitled "Constitutive equations from Gaussian molecular network theories".

Two reports have been published viz. "A study of impact strength testing and its relevance to real mouldings", (S. Turner), P.A.C., 52, 2739 (1980) and "Structure and properties of uni- and bi-axially oriented poly(propylene) films : Part 1 (A.J.de Vries), P.A.C. 53, 1011, (1981).

Future work includes a major programme on "Elongation of Molten Polymers", a programme on flow of bicomponent systems, a programme on fracture toughness of crystalline polymers and extensions of the existing programmes on oriented poly(propylene) films and impact testing.

F.N.Cogswell (I.C.I.) will take over as secretary.

Next meeting scheduled in conjunction with the IUPAC meeting in Athens, 29th August - 2nd September 1982.

II. Molecular Characterization of Commercial Polymers. Dr.Th.G.Scholte reported that the numbers of contributors had now increased to 25. A meeting of the working party was held on 29th March 1981 at Hüls (Marl).

Measurements on heptane soluble and insoluble fractions of poly(propylene) were commenced under defined conditions. The sub-group on rubber characterization had now started work on poly(butadiene) and SBR samples distributed by D.Timms (ISR). Fourteen laboratories were collaborating. New work to start this year included a programme on linear low density poly(ethylene) with NMR, I.R. and other techniques being used in addition to GPC.

III. Supported Polymer Films. Prof. Dulog reported that the work was carried out in two parallel sub-groups on Paints and Adhesion. Total membership was now 37 and a full meeting had been held in Copenhagen on 9th and 10th October 1980.

Three publications had appeared, viz. "[illegible] of functional groups in amino resins" (Christensen), Progress in Organic Coatings (1980). "Determination of Non-volatile content of amino resins" (Itambani) [illegible] Poly[illegible] "Non-destructive drying of amino resin solutions", Journal of Coatings Technology [illegible]. Present work on adhesion continues (Zorll) with involvement of re emission spectroscopy and scanning microscope photometry techniques. The analytical work (Lubineau) is continuing with characterizing melamine-formaldehyde reactions. A new project on characterization of emulsion paints has been initiated (Hansen).

The next meeting is scheduled for 1st and 2nd October 1981 in Wassenheim (Netherlands). Two meetings will be held in 1982, one in May (Europe) and another in Amherst in July (U.S.A.).

IV. Thermal Properties. Prof. Hinrichsen reported that [illegible] laboratories, worldwide, were now co-operating on the initial programme concerning with differential thermal analysis of poly(styrene) through the Tg region.

Future work would be carried out on PET and poly(propylene). Contact was being made with the international organizations 'ICIA' and 'NAT'S'.

The next meeting will be held in conjunction with the IUPAC conference in Amherst (U.S.A.), 12th - 16th July 1982.

V. Kinetic Parameters in Free Radical Polymerization. The [illegible] reported that progress was satisfactory with all five laboratories working on [illegible] having now submitted results. These are being analysed by O'Driscoll and Derrty (Waterloo, Canada). Only one laboratory has so far submitted results on styrene polymerization, but others are expected. A Kinetics Commission might be started by IUPAC within the Physical Chemistry Division and Eastmond was asked to inform Sheppard of our current activities.

The first major meeting would be held in conjunction with the Amherst (U.S.A.) IUPAC meeting 12th - 16th July 1982.

VI. Surface Properties of Films and Fibres. A written report by Prof. Clark was received. Little progress had been made to date and only a limited programme on standardizing chemical tagging techniques was expected to start in the coming year.

The Commission viewed the lack of progress with disappointment and asked that the feasibility of starting a programme in the U.S.A. should be explored.

4. Future Developments

Prof. Mandel brought forward the report the commission had [illegible] on a possible project on "Poly(electrolytes)".

The report was extremely positive. Twelve laboratories on a world basis promised co-operation and an initial meeting had agreed that a start should be made on characterization of 'standard' poly(electrolytes) - sulphonated poly(styrenes). The Commission unanimously agreed this work should start initially as a subgroup of working party II.

5. Programme Co-ordination

It was agreed that it was better not to directly co-ordinate the East Asian or the East European programmes, with existing programmes in Working Party I. Prof. Kelen pointed out that a number of programmes existed in East European countries. The Chairman would write to Prof. Frommelt, (Akademie der Wissensh) for further details.

Following a letter from M.Williams (IUPAC) it was agreed to invite a member from the ISO (TC 61) committee to attend the next Commission meeting as an observer.

6. Joint Meeting with Commission V.8 on Solubility Data

In general it was felt that collections of good quality data on well defined systems had merit.

7. Elections

(a) Dr. Barrett's resignation from Chairman was reluctantly accepted and the Commission unanimously elected Dr.P.L.Clegg to follow him. (b) Titular Membership was extended for two years for Dr.R.E.Wetton (who would remain as Secretary), Prof.B.T.Clark, Dr.P.L.Clegg, Dr.G.C.Eastmond, Prof.G.Hinrichsen, Dr.Th.G Scholte and Prof. Dulog was confirmed as Titular Member for 4 years. (c) Associate Membership was extended for two years for Prof.H.Benoit, Dr.A.J.de Vries and proposed for four years for Dr.J.J.Barrett, Prof.V. Kabanov. (d) National Representatives: Extension for two years was approved for Dr.T. Kelen (Hungary), Dr.P.Szewczyk (Poland) and Prof J.B[illegible] (Czechoslovakia) was approved as a new member for two years.

8. Next Meeting: Berlin, September 16th and 17th 1982.

V. ANALYTICAL CHEMISTRY DIVISION

Commission on Analytical Reactions and Reagents
Commission on Microchemical Techniques and Trace Analysis
Commission on Analytical Nomenclature
Commission on Spectrochemical and Other Optical Procedures For Analysis
Commission on Electroanalytical Chemistry
Commission on Equilibrium Data
Commission on Analytical Radiochemistry and Nuclear Materials
Commission on Solubility Data

Analytical Chemistry Division Committee

(MEETINGS OF 25 - 30 AUGUST 1981)

All members of the Division Committee were present except co-opted members Professor N. Tanaka, Professor H. Malissa and Professor E. Pungor, who sent their apologies. Professor Morrison attended the meeting on August 25, and Professor Hulanicki only on August 31. The deaths of Professor Gillis, Dr. Menis, and Dr. H. Zettler were noted with deep regret and a moment of silence observed in their memory.

Election of New Officers and Committee Members: Dr. White announced the election of Professor G. H. Nancollas, USA, to the Division Committee for the term 1981-1985. Co-opted members were selected: Dr. A. C. Docherty, UK, reelected; Professor H. Freiser, USA, reelected; Professor E. Pungor, Hungary, reelected; Dr. T. S. West, UK, elected to serve as Past President and Vice President, 1981-1983; Professor J. Robin, France, elected to represent spectroscopy interests; and Professor H. W. Nurnberg, FRG.

The Nomination/Election Committee for 1981-1983 was selected: Professor G. Duyckaerts, Belgium, Chairman; Professor T. Fujinaga, Japan; Professor G. G. Guilbault, USA; and Dr. A. Strasheim, South Africa.

Representation on IDCNS: Professor H. Freiser, USA, was selected as the candidate of the Division to IDCNS for appointment by the IUPAC President. (Professor N. Tanaka has resigned his appointment.) Professor Y. Zolotov, USSR, was chosen as the Division representative to be an associate member.

ISO: Dr. White reported that 44 standard methods have been reviewed since the 30th General Assembly. The Division is receiving copies of the revised procedures and is pleased to observe that our comments have been noted and action taken. This project is operating quite satisfactorily.

Division Projects

Manual of Analytical Nomenclature: Professor Freiser reported that he had recruited Professors Perone and Nancollas, USA, to assist him and Professor Irving in the preparation of the manual. Dr. McDonald has asked to be relieved of his assignment. Liaison with the Commissions has also been established to expedite this project. These are: Professor Uden, V.1; Dr. Heinrick, V.2; Professor Perone, V.3; Dr. Jenkins, V.4; Professor Kadish, V.5; Professor Nancollas, V.6; and Ir. deBruin, V.7.

Multilingual Dictionary: Professor Rafael Gallego Andrea has agreed to handle the Spanish translation; Professor Robin, French; and Professor Zolotov, Russian. Professor Pungor will continue to head this project, with Professor Zolotov coordinating for the Division Committee.

Trace Elements in Natural Waters: Professor Nurnberg agreed to head this project. He presented a uniform guide to be followed by Commissions V.1, V.2, V.3, V.4, V.5, V.6, and V.7 in their participation and will coordinate their activities in this project.

Division Think Tank: The Division Committee decided to continue this activity with Professor Nurnberg Chairman, assisted by Professors Grasserbauer, Pungor, and Bates. Tentatively, the current plans are to extend the trace elements in water project to biological materials and selected organic pollutants. Other ideas are to explore ways of making the work of the Division more widely known and to recruit experts to write articles on their opinion of the frontiers of analytical chemistry.

Position of Commission V.7 - Analytical Radiochemistry and Nuclear Materials: In response to the recommendation by the IUPAC Executive Committee to combine this Commission with V.2, the Division Committee, with consent from Professor Zollinger, formed a Working Party consisting of Professor Grasserbauer, Chairman; Dr. Steinnes; Ir. deBruin; and Professor E. Roth, Inorganic Chemistry Division, to evaluate the work of V.7 and make recommendations on its future terms of reference to the Division Committee by the next General Assembly.

Programs of the Commissions: Professor Pellerin led an in-depth review of the current and newly prepared programs. Those that had little prospect of completion in the near future were dropped and emphasis placed on those promising productive information. Approval was given to the program to be presented to the Bureau.

Membership of Commissions: Rosters were presented by the Commission chairmen and approved for submission to the Bureau by Professor Pellerin. Commissions are planning to hold off-year meetings at scientific conferences to economize as much as possible.

Professor West expressed the appreciation of the Division to retiring members, Professors Morrison and Nurnberg, for their contributions to the Union. Assignments for Division Committee members were made as follows: Professor Fujinaga, Trace Elements and Multilingual Dictionary Projects; Professor Hulanicki, Manual and Dictionary; and Dr. Docherty, Trace Elements in Natural Waters.

The next meeting of the Analytical Chemistry Division will be held during the 32nd General Assembly, Lyngby, Denmark, August 18-26, 1983.

V.1 Commission on Analytical Reactions and Reagents

(MEETINGS OF 27 - 29 AUGUST 1981)

Present: J.Inczédy, chairman
G. den Boef, secretary
G.Ackermann, S.B.Savvin, W.I.Stephen, E.Wänninen, titular members
J.Buffle, G.Duyckaerts, A.Hulanicki, F.Ingman, D.Thorburn Burns, associate members
D.E.Ryan, K.Ueno, national representatives

1. The commission agreed with the Division officer's opinion that it has to be preferred to work on a limited number of projects and to try to finish each project as quickly as possible.

2. Personal affairs.
G.Ackermann, G. den Boef, W.I.Stephen and E.Wänninen were reelected as titular members for a new period of 4 years.
G. den Boef will again act as secretary.
M.Pesez, J.Buffle, M.Guernet, A.Pilipenko and J.Ruzicka finished their activities for commission V.1.
L.Sommer and D.Thorburn Burns were reelected for another 4 years as associate members.
Other associate members elected were: D.Massart, D.Ryan, P.Uden and K.Ueno.

3. Projects.
   3.1 The contribution of V.1 to the division project on water analysis makes good progress and will be completed in 1982.
   3.2 The project on selectivity is now finished. The paper presented at the meeting was accepted for publication.
   3.3 The project: purity and identification of Acid-Base Indicators will be continued.
   3.4 The project on the analysis of polyphenols is now completed. A publication has been prepared.
   3.5 It was decided not to continue the project on organotin compounds.
   3.6 Part II of the project on complexometric indicators has been completed and will be published.
   3.7 The following new projects have been proposed to the Division
      1. Quantitative Characterization of Spectrophotometric Methods.
      2. Classification of Interferences.
      3. Metal Buffers in Chemical Analysis.

4. Next meeting: During the week of 23-29 August 1982, somewhere in the German Democratic Republic.

V.2 Commission on Microchemical Techniques and Trace Analysis

(MEETINGS OF 27 - 29 AUGUST 1981)

1.Membership. Dr. Townshend was re-elected as Secretary until 1985. Dr. Terent'eva and Prof. Mizuike had completed their full terms as Titular Members, but were elected as associate members until 1983. Dr. La Fleur had completed his 4-year term as Titular Member and was not re-elected. Prof. Marczenco and Prof. Morrison were promoted to Titular Members, with the proviso that if Prof. Morrison was adjudged to be ineligible, Dr. Heinrich should be promoted to Titular Membership. Prof. Tölg was confirmed as Chairman until 1983. Dr. Ottaway and Dr. Heinrich were re-elected as Associate Members until 1985. Dr. Pinta was not re-elected. Dr. K. Fuwa, Prof. Yu. Zolotov and Prof. K. Beyermann were elected as Associate Members until 1985. Profs. Campbell, Kemula, Janák, F. Adams and A. Cedergren and Dr. Z. Horvath were confirmed as National Representatives.

2.Reports Completed. The following were to be submitted to the Division Committee. General Aspects of Trace Analytical Methods. V. Practical Limits of Determination of Trace Analytical Methods (Koch, Morrison, La Fleur, Tölg, Townshend, Jackwerth); Recommendations concerning In-Situ Microanalysis (Grasserbauer, Morrison, Heinrich); Separation and Preconcentration of Trace Substances. II. Multielement Preconcentration by Precipitation of the Matrix (Jackwerth); III. Flotation as a Preconcentration Technique (Mizuike).

3.Current Projects. General Aspects of Trace Analytical Methods. VI. Stability of Synthetic Standard Solutions (Gomiščék, Tölg); VII. Applicability of Pressurized Sample Dissolution in Trace Analysis of Biological Materials (Gomiščék); VIII. Standardization in Organic Trace Analysis (La Fleur). Graphical Representation of Trace and Microanalytical Schemes (Tölg) Trace Analysis of Microsamples (Pinta, Ottaway and Tölg). All these projects were terminated because of lack of progress.

Critical Evaluation of Analytical Methods for Determination of Trace Elements (Townshend, Tölg, Ottaway, Marczenco and Campbell). The structure and title of this project were modified. The current projects are: I. Cobalt in Biological Materials (Townshend); II. Selenium in Biological Materials (Campbell); III. Chromium in Biological Materials (Ottaway); IV. Molybdenum in Biological Materials (Marczenco); V. Thallium in Various Matrices (Tölg) VI. Nickel in Biological Materials (Townshend).

Reports on I-IV were discussed and after written comments are to be prepared for publication.

Organic Elemental Microanalysis by Physical Methods (Terent'eva, Lamotte). A final report was discussed. A revision would be produced early in 1982.

Parameters of Interest for Standards in In-Situ Microanalysis (Heinrich, Grasserbauer and Tölg). Prof. Grasserbauer would send Dr. Heinrich suggestions for a project outline.

Determination of Trace Elements in Natural Waters (Division Project) (Commission project leader: Griepink).

The commission resolved to present a critical comparison of national and international standard procedures for lead, cadmium and mercury in waters, supplemented by a critical evaluation of published methods.

4.New Projects. Methodology of Trace Organic Analysis I. Preliminary Survey (Lamotte). Survey of Decomposition Methods in Elemental Trace Analysis (Tölg, Griepink). Critical Evaluation of Analytical Methods for Determination of Trace Elements.

VII.Trace Analysis of Semiconductor materials (Grasserbauer, Morrison);

VIII.Manganese in Biological Materials (Ottaway).

Cooperation with commission V11.4 and its trace metal sub-committeeswas agreed upon.

Present: Prof. G. Tölg (Chairman), Dr. A. Townshend (Secretary), Prof. A. Mizuike, Dr. E.A. Terent'eva, Dr. B. Griepink, Prof. E. Jackwerth (Titular Members), Prof. G.H. Morrison, Prof. Z. Marczenko, Prof. M. Grasserbauer, Dr. A. Lamotte, Dr. J.M. Ottaway (Associate Members), Prof. A.D. Campbell (National Representative, New Zealand), Dr. D.G. Westmoreland (Observer, U.S.A.), Prof. Yu. Zolotov (Divisional Committee Member).

V.3 Commission on Analytical Nomenclature

(MEETINGS OF 26 - 29 AUGUST 1981)

Present: G. G. Guilbault (Chairman), G. Svehla (Secretary), R. W. Frei, H. Freiser, S. P. Perone, N. M. Rice (Titular Members), R. van Grieken and D. Klockow (Associate Members).

Administrative Matters: Apologies, Minutes of earlier meetings, Matters arising, Chairman's business, General IUPAC matters, Division V. matters and Membership were discussed.

Membership for 1981-83: consists of 6 titular members (R. W. Frei, G. G. Guilbault, D. Klockow, S. P. Perone, W. Simon and G. Svehla), 11 associate members (C. A. M. G. Cramers, L. S. Ettre, A. Fein, H. Freiser, R. E. van Grieken, W. Horwitz, H. M. N. H. Irving, B. Kowalski, R. F. Martin, N. M. Rice and B. Schreiber) and 6 natinal representatives (A. C. S. Costa, Brazil; E. Grushka, Israel; W. E. Harris, Canada; D. Jagner, Sweden; R. Rosset, France and J. Stary, Czechoslovakia).

Status of Projects: 14 nomenclature projects and 5 "Development and Publication" projects were discussed and 2 new projects were initiated. Altogether 8 projects were finalised (Automated Analysis, Luminescence Spectroscopy, Thermal Analysis III and IV, Chiroptical Methods, Liquid-Liquid Extraction, as well as the D&P projects on Precipitation Methods and Ion Selective Electrodes), while 10 projects reviewed (Kinetic Methods of Analysis, Sampling, Information Storage and Retrieval, Presentation of Results of Chemical Analysis, Environmental Analysis, Nuclear Analysis, Chromatography, Ion Exchange, as well as the D&P projects on Luminescence Methods in Analytical Chemistry and Ion Exchange Methods). 2 new projects were initiated (Information Theory Applied to Analytical Chemistry and Bioanalytical Methods).

Joint Meetings: Some of the above projects were discussed at joint meetings with Commissions I.5; V.1; V.4;, V.7 and VII.1, or their representatives.

Involvement in Division Projects: The Commission is involved in all three Division Projects through R. W. Frei (Determination of Trace Elements in Natural Waters), G. Svehla (Multilingual Dictionary of Analytical Terms) and H. Freiser (Manual of Analytical Nomenclature).

Involvement in Inter Divisional Project: G. Svehla acted as Secretary for the International Symposium on the Harmonization of Collaborative Analytical Studies (Helsinki, August 1982), organized jointly by IUPAC Divisions V, VI and VII.

Date and Place of Next Meeting: Monday, 27th September 1982, in the premises of the Free University, Amsterdam, Netherlands. Nine members of the Commission are expected to attend.

11th January, 1982

Dr. G. Svehla
(Secretary)

V.4 Commission on Spectrochemical and other Optical Procedures for Analysis

(MEETINGS OF 25 - 29 AUGUST 1981)

Secretary : Dr R Jenkins

Philips Electronic Instruments Inc.
85 McKee Drive
MAHWAH NJ 07430
USA

Since our last meeting in Davos we have published three reports:

1)	Part IV X-Ray Emission Spectroscopy	October 1980
2)	Part V Radiation Sources	October 1981
3)	Part VI Molecular Luminescence Spectroscopy	October 1981

First drafts of the following reports were discussed in detail:

1) Part VII, Analytical Optical Molecular Spectroscopy, UV and Visible
2) Part IX, Instrumentation for Dispersion and Isolation of Spectra
3) Part X, Preparation of Materials for Analytical Atomic Spectroscopy

Each of these drafts is in a fairly advanced state and with the aid of one minimeeting and appropriate correspondence we are confident that these reports will be ready for final submission in 1983. Joint meetings were held with Commission VII-2 for Parts VII and IX, and with Commission V-3 for publication of Luminescence Spectroscopy documents.

The status of Part VIII, Nomenclature for X-Ray Wavelenghts was discussed and the content and the format of the final draft agreed. This draft is scheduled for completion in March 1982.

A new project was started Part XI, Radiation Detectors the first draft of which should be ready at the next general meeting in Denmark. The joint project on Trace Elements in Natural Waters has been slow in getting off the ground and steps were taken to expedite the completion of the first draft. We hope that this will be done within one year.

Dr Strasheim was elected as the new chairman; Dr Jenkins was reelected as secretary; Drs Laqua, Melhuish and Rubeska, plus Professor Zander were reelected as titular members; continuing associate members include Professors Alkemade, Grabowski, Plsko and Robin, and Drs Butler, Belyaev, Mermet and Senemaud. New associates include Dr Ure and Prof. Kirkbright.

V.5 Commission on Electroanalytical Chemistry

(MEETINGS OF 26 - 29 AUGUST 1981)

Highlights. An important controversy was resolved by endorsing a new hierarchy of pH standards, including a "reference value pH standard" and six (6) additional "primary pH standards." Several trace analysis projects were consolidated and a new subcommittee, on Electroanalytical Methods of Environmental Trace Analysis, was established. Considerable progress was reported on the updating of Latimer's Oxidation Potentials.

Publications. During the recent biennium, two (2) reports appeared in print in final form: Pure Appl. Chem., 1979, Vol. 51, pp. 1913-1980; 1980, Vol. 52, pp. 1387-1396. One report is in press, viz., "pH Measurements in the Marine Environment," Pure Appl. Chem., 1982, Vol. 54. The conversion of a provisional report into a final report was approved: Pure Appl. Chem., 1979, Vol. 51, pp. 1159-1174. Seven (7) additional reports were cleared by Commission V.5 for submission to the Division Committee for final approval.

Continuing Projects. (C.1) Thermodynamic Constants for Individual Ionic Species (MARCUS, Mussini), (C.2) Voltammetry at Glassy Carbon Electrodes (GROSS, Jordan), (C.3) Ion-Selective Electrodes in Non-Aqueous and Mixed Solvents (IZUTSU), (C.4) Spectroelectrochemistry (DURST, Kadish), (C.5) Buffer Solutions for Glass Electrode Testing at High Temperatures (COVINGTON), (C.6) Response Times of Ion-Selective Electrodes and Potentiometric Cells (PUNGOR), (C.7) Acid-Base Dissociation Constants in Dipolar Aprotic Solvents (IZUTSU).

New Projects. (N.1) Electroanalytical Methods of Environmental Trace Analysis (NURNBERG, Buffle, Covington, Durst, Kalvoda, Kapoor, Smyth), (N.2) Chemically Modified Electrodes (DURST, Kadish, Izutsu), (N.3) Voltammetry at Interfaces Between Immiscible Solvents (SENDA), (N.4) pH Scales in Non-Aqueous and Mixed Solvents (JUILLARD, Bates, Covington, Marcus, Mussini), (N.5) Purification of Alcohols and Cyclic Ethers and Tests for Impurities (COETZEE, Marcus), (N.6) Standard Systems for Heterogeneous Charge Transfer Rates (SMITH), (N.7) Standard Potentials of Amalgam Electrodes and Activity Coefficients of Metals in Mercury (MUSSINI).

Cooperation with Other Commissions. Joint meetings were held and projects of mutual interest were discussed as follows:

I.3, ELECTROCHEMISTRY: pH standards; oxidation-reduction potentials; standard potentials of amalgam electrodes; electrode kinetics; Gibbs free energies of transfer of single ions between solvents.

V.2, MICROCHEMICAL TECHNIQUES AND TRACE ANALYSIS: Environmental trace analysis and ion chromatography.

V.3, ANALYTICAL NOMENCLATURE: Electroanalytical section of the compendium on analytical nomenclature.

V.6, EQUILIBRIUM DATA. Speciation of trace metal complexes; thermodynamic functions of transfer of single ions between solvents.

V.8, SOLUBILITY DATA: Monograph on solubility of metals in mercury.

Membership. In the wake of elections, the updated roster of the Commission is listed below.

CHAIRMAN: J. Jordan (USA); SECRETARY: K. Izutsu (Japan).

TITULAR MEMBERS: A.K. Covington (UK), J. Juillard (France), R.C. Kapoor (India), E. Pungor (Hungary).

ASSOCIATE MEMBERS: J.F. Coetzee (USA), W. Davison (UK), R.A. Durst (USA), M. Gross (France), K.M. Kadish (USA), R. Kalvoda (Czechoslovakia), Hung Kao (Peoples' Republic of China), Y. Marcus (Israel), T. Mussini (Italy), H.W. Nürnberg (Federal Republic of Germany), M. Senda (Japan), D.E. Smith (USA), N. Tanaka (Japan).

NATIONAL REPRESENTATIVES: B. Birch (UK), M. Branica (Yugoslavia), J. Buffle (Switzerland), Z. Galus (Poland), B. Gilbert (Belgium), E. Grushka (Israel), G. Johansson (Sweden), R. Neeb (Federal Republic of Germany), J. Osteryoung (USA), W.C. Purdy (Canada), S.K. Rangarajan (India), W.F. Smyth (Ireland), Klara Tóth (Hungary).

Subcommittee on Electroanalytical Methods of Environmental Trace Analysis: H.W. Nürnberg, Chairman; J. Buffle, R. Durst, E. Pungor, W.F. Smyth.

Vote of Thanks. A motion was passed unanimously thanking J.F. Coetzee for a decade of dedicated service and inspired leadership, as secretary and chairman.

Next Meeting. The next plenary meeting of the Commission is scheduled for the 32nd IUPAC General Assembly, August 18-26, 1983, in Lyngby, Denmark. A more limited off-year meeting devoted mainly to the Commission's trace analysis projects will be held in 1982. The time and place will be announced later.

Present. J.F. Coetzee, chairman; J. Jordan, secretary; A.K. Covington, K. Izutsu, J. Juillard, R.C. Kapoor, titular members; R.A. Durst, M. Gross, K.M. Kadish, R. Kalvoda, Y. Marcus. T. Mussini, H.W. Nürnberg, M. Senda, associate members; D.D. Perrin, W.F. Smyth, national representatives; R.G. Bates, T. Fujinaga, Analytical Division Committee; J. Buffle, Commission V.1; Dr. W. Frankvoort, Netherlands Metrology Service, observer.

V.6 Commission on Equilibrium Data

(MEETINGS OF 26 - 29 AUGUST 1981)

1. Present: G.H. Nancollas (Chairman), S. Ahrland (Secretary), G. Anderegg, S. Kertes (in part), H. Ohtaki, D. Perrin, L. Pettit, P. Valenta.

2. Stability constants of metal ion complexes. Second supplement to the section of inorganic ligands, compiled by E. Högfeldt, is foreseen to be ready for publication at the end of this year. The volume, of approximately 1200 pages, will cover the period 1969 - 1974. To bridge the gap up to present time, and to ensure that the compilation will in the future keep up with the publication of new data, the project will be reorganized. Compilers will be recruited, mainly from the Subcommittee on Stability Constant Data, to take care of publications issued within specified geographic areas. A standardized data card will be introduced, to ease the task of compilers and coordinators. The possibilities of computer storage of the data compiled (including those published in earlier volumes) will be investigated. Such a storage would make possible a unified publication of the whole body of data in the future, and also a retrieval of specified data on demand.

3. Critical surveys of formation of metal complexes. Two more surveys, on indium complexes by D.G. Tuck, and on NTA-complexes by G. Anderegg, are now ready for publication.

4. Equilibrium data for interaction between trace metals and ligands in natural waters. The program is part of the extensive project on trace metals in natural waters launched by the Analytical Chemistry Division. A meeting delineating the program for the contribution of this Commission was held in Buffalo, April 1980. Presently, reports on the speciation in seawater, by S. Ahrland, and in estuaries, by A. Bourg, have been completed, as well as a report on humic acid complexes by D.S. Gamble, J.A. Marinsky and C.H. Langford. Other reports are in various stages of preparation. It is hoped that a fairly complete survey will appear in 1982.

5. Membership. S. Ahrland was elected chairman for 1981-1983, subject to approval of the Bureau. H. Ohtaki was elected secretary. E. Goldberg was elected titular member for 1981-1983, I. Grenthe and P. Valenta titular members for 1981-1985. G. Anderegg, A.C.M. Bourg, W.A.E. McBryde, I.Nagypal, G.H. Nancollas and O. Yamauchi were elected associate members for 1981-1985.

6. Next ordinary meeting will take place at next General Assembly, Lyngby, 1983. An informal meeting is foreseen in connection with the 22. ICCC; Budapest, August 1982.

V.7 Commission on Analytical Radiochemistry and Nuclear Materials

(MEETINGS OF 27 - 29 AUGUST 1981)

1) Present. Sankar Das (Chairman); Lux (Secretary); Steinnes, Schweikert, Crespi, de Bruin (Titular Members); Docherty (National Representative U.K.).

2) Status of V.7. As a result of discussions in Leuven, a proposal for continuation of the Commission until 1983 was adopted. Actions taken in this context are noted below.

3) Project Report Cleared. Methods for analysis of fissile and fertile elements: basic data of interest for the spectrophotometric determination of thorium (Sankar Das). Report approved subject to minor revisions.

4) Current Projects.

Radioanalytical problems in fusion: I. Facilities (Crespi). A progress report was presented, final report should be completed by 1983.

Critical evaluation of radioimmunoassay and related methods (Comar). Project terminated.

Analytical aspects of dating carbonates by U and Th (Rafter). Project terminated.

Liquid-liquid separations in radioanalytical chemistry, Part II (Sakanoue, Saito, Myasoedov). A preliminary report was required by 1982.

Counting errors in radioactivation analysis (Lux). A preliminary report was approved.

Recommendations for reporting radioanalytical methods of analysis (de Bruin). Project terminated because of overlap with an expanded joint project with V.3.

Nuclear analysis nomenclature (de Bruin). Joint project with V.3, a preliminary report was required by 1982.

Biological reference materials for trace element determination by radioanalytical methods (Steinnes). A preliminary report was presented.

Determination of trace elements in water by radiochemical techniques (Steinnes). Contribution to Division V project 1. A preliminary report was required by 1982.

Critical evaluation of charged particle activation analysis (Schweikert, Hislop). A preliminary report was required by 1982.

Assessment of nuclear methods for analysis of fissile and fertile elements (Hislop). Project terminated.

Analytical chemistry and speciation of transuranium elements in the environment (Sakanoue, Myasoedov). A preliminary report was required by 1982.

5) Membership. For 1981-83 is as follows: Steinnes (Chairman), Schweikert (Secretary), de Bruin, Crespi, Lux (Titular Members); Sankar Das, Gorski, Hislop, Kosta, Lieser, Myasoedov, Sakanoue, Whitehead (Associate Members); Saito, Tölgyessy (National Representatives). Tölgyessy was accepted as National Representative for Czechoslovakia. The following retired from V.7: Rafter (Titular Member); Comar, Cook Franchimont (Associate Members); Docherty (National Representative).

6) Next Meeting. It is planned to hold an interim meeting, probably in April 1982 in Munich FRG, to review progress on current projects.

V.8 Commission on Solubility Data

(MEETINGS OF 26 - 29 AUGUST 1981)

Dr. Lewis H. Gevantman
Office of Standard Reference Data
National Bureau of Standards
Washington, DC 20234, USA

The meeting of Commission V.8 was called to order at 10:30 a.m., August 26, 1981. Thirty-seven scientists were in attendance (see list below). Minutes of the previous meeting held in Davos were approved as submitted.

The chairman outlined the progress of the Commission since its last meeting in Davos. He pointed out that seven volumes have now been published by Pergamon. An additional three volumes were with the publisher. Another three or four manuscripts were nearing completion for submission to the publisher in 1982. Other manuscripts, totalling upwards of five to ten, were projected for completion in 1983. Combined Newsletter 2, distributed to a limited group of people and describing the Project status, was also produced in 1980.

A meeting was held with the Committee on Publications and Pergamon representatives to clarify matters on the publication and distribution of the Solubility Data Project books. It was agreed that a new set of operating procedures involving all the principal parties be established in writing by May 1982.

The chairman announced the formal establishment of the International Center for Solubility Information and Research at Emory University in Atlanta, Georgia, USA, under the direction of Professor H. L. Clever. The Center's function will consist of the compilation, evaluation, and dissemination of numerical solubility data and information. It will also perform research in areas where gaps in the data exist. Guest workers will be welcomed to perform research in all areas associated with the Center's functions. Close liaison between the Center and the work of the Commission is to be one of the guiding principles in its operation. Arrangements have already been made for Dr. H. Miyamoto (Japan) to spend a sabbatical year at the Center evaluating solid-liquid solubility data. The Center has the firm backing of IUPAC which is helping it find outside financial support.

In addition to the establishment of the Center, three new areas have been identified for compilation and evaluation activity within the Commission. They include polymer solubility under Dr. B. A. Wolf, solubility in metals under Dr. H. Jehn, and solubility of complex organic molecules under Dr. A. Paruta. A number of inter-Commission meetings, seven in all, activated the possibility of mutual interest in chemical thermodynamics, polymers, and solubility in metals.

A consensus was reached on the need for a symposium on topics embracing solubility data. The time and place designated was 1984 at the University of Western Ontario, London, Ontario, Canada. Dr. J. W. Lorimer was named to organize the conference. A scientific committee will also be established to create the topics to be covered.

The Commission reviewed a number of internal administrative items aimed at achieving more efficient production and style uniformity in the published volumes. Decisions were made regarding nomenclature, indexing, style sheets, reviewer instructions, etc. A style manual for authors is to be produced in the coming year. In addition, three subcommittees were established to deal with the production of the publications issued by the Commission.

The next meeting of Commission V.8 was tentatively set for 1982 at North Carolina State University, Raleigh, North Carolina, USA. Dr. F. W. Getzen will make the necessary arrangements. The meetings of Commission V.8 were formally concluded at 17.00 hours on August 30, 1981.

Those present: H. Akaiwa (Japan), A. F. M. Barton (Australia), R. Battino (USA), K. R. Bullock (USA), S. A. Chen (Republic of China), H. L. Clever (USA), R. Cohen-Adad (France), J. Eysseltova (Czechoslovakia), P. G. T. Fogg (UK), W. Gerrard (UK), F. W. Getzen (USA), L. H. Gevantman (USA), M. C. Haulait (Belgium), W. Hayduk (Canada), H. Høiland (Norway), A. L. Horvath (UK), P. Huyskens (Belgium), H. Jehn (FRG), C. Kalidas (India), A. S. Kertes (Israel), J. W. Lorimer (Canada), Z. Maczynska (Poland), A. Maczynski (Poland), H. Miyamoto (Japan), A. Paruta (USA), R. Piekos (Poland), R. F. Prini (Argentina), B. Scrosati (Italy), D. G. Shaw (USA), S. Siekierski (Poland), R. P. T. Tomkins (USA), C. Treiner (France), H. Vanderdeelen (Belgium), A. Vesala (Finland), B. A. Wolf (FRG), E. M. Woolley (USA), and C. L. Young (Australia).

VI. APPLIED CHEMISTRY DIVISION

Commission on Food Chemistry
Commission on Biotechnology
Commission on Oil, Fats, and Derivatives
Commission on Atmospheric Environment
Commission on Pesticide Chemistry
Commission on Water Quality

Applied Chemistry Division Committee

(MEETINGS OF 25,28 and 30 AUGUST 1981)

Present. Dr. H. Frehse (Vice-President, in the Chair), Division Committee Members and Representatives of the Commissions.

Professor Suomalainen opened the meeting by thanking the Division Committee Members for their patient cooperation in the reorganizations of the last decade, and transferred the Chair to the Vice-President, Dr. Helmut Frehse.

1) Membership of the Division Committee. The nominations of Dr. Coles, Prof. Hollo, Prof. Naudet and Dr. Kurucz as the new Committee Members for 1981-1985 were endorsed. Dr. Kearney was elected as the Vice President and President-Elect of the Division and Dr. Coles as the Division Secretary. Prof. Kojima, Dr. Vos and Dr. Egan were nominated as Co-opted Members for a two year period and Mr. Schjødtz Hansen's term as a Co-opted Member was extended by two years. Prof. Kojima, Mr. Oksanen, Prof. Hollo and Dr. Egan were nominated as the Corresponding Members to the Commissions on Food Chemistry; Biotechnology; Oils, Fats, and Derivatives; and Pesticide Chemistry, respectively.
2) Suspension of the Commissions. The Division Committee expressed its dissatisfaction with the way by which the proposals of the Union Officers to the Council to suspend the Commissions on Atmospheric Environment, Water Quality and Reclamation of Solid Wastes were forwarded without the opportunity for the Commissions to consider the criticism presented. However, it was accepted that Commissions on Atmospheric Environment and on Water Quality shall continue in existence until 1983 subject to various limitations in regard to their membership, financies and activity and that the suspension of the commission on Reclamation of Solid Wastes has become a fait accompli. Working groups should be set up by the Division Committee to propose new programmes for the three Commissions. All Commissions were requested to study carefully the criticism presented of their programmes and projects and to report to the Division Committee their views on the validity of the criticism.
3) Guidelines for IUPAC projects. It was felt that the draft guidelines for IUPAC projects should be further elaborated. The Committee stressed that major contributions to the organization of scientific programmes of symposia should be regarded as projects.
4) Outside Experts. The Commissions should carefully prepare proposals of new projects at their initiation so as to result in sound and justified projects. In case of doubt the Commissions should, either themselves or through the Corresponding Members, request the opinion of an outside expert and/or turn to the Division Committee for advice.
5) Project Forms. The forms for initiation and for progress evaluation of projects forwarded by the Secretary General were found to be basicly satisfactory. The forms should be regarded as flexible in their outline and enough space should be provided as necessary for progress evaluation by the Corresponding Member and description of the project.
6) Commission Publications. It was decided that the Commissions should, after every annual meeting, update the list of Commission publications and submit it to the Division President and Secretary.
7) Publication Matters. The Committee recognized that there still exist publication problems like limited distribution and too diversified content of Pure and Applied Chemistry (PAC), the inability of PAC to incorporate all papers and technical difficulties associated with camera ready copies. The Committee did not consider the system of dual publications desirable, but rather recommended that if a paper can be published more rapidly in some scientific journal other than PAC, this should be permitted and reference to the article should be made in PAC. The Committee requested the editors of Chemistry International to submit a copy of articles concerning the work of a Commission to the Commission Chairman for comment before publication.
8) Rules and Guidelines. The Committee decided to withdraw the Division Rules recommended for approval by the Bureau in 1980 and to reconsider them together with the guidelines. Comments and amendments for both of them were invited to be given by March 1, 1982.

9) Harmonization of Collaborative Analytical Studies. In the meeting of the Harmonization of Collaborative Analytical Studies held in Helsinki, 20-21 August 1981, a general acceptance had been given that the Divisions on Analytical Chemistry, Applied Chemistry, and Clinical Chemistry, should give positive attention to the question of the harmonization. Dr. Vos had attended and contributed to this meeting on behalf of the Division.
10) Relationships with other Bodies. The Committee discussed relations with IOML, IUFoST, ISO, CEE, WHO and NMKL. During the last two years the Division had connections to various other bodies, but there were no progress or substantial interest to be reported.
11) Finance. It was recognized that disclosing of financial allotments to each Commission may be desirable in the future.
12) Next Meeting. The next meeting will be held in London, tentatively on October 9 and 10, 1982.

VI.1 Commission on Food Chemistry

(MEETINGS OF 26 - 29 AUGUST 1981)

1. Present

G. Billek (Chairman), L.E. Coles (Vice-Chairman), M. Bergstrøm-Nielsen (Secretary), A.D. Campbell, M. Jemmali, S.J. Kubacki, P.L. Schuller, P.S. Steyn (Titular Members); M. Castegnaro, G. Grimmer, K. Kojima, P. Krogh, W. Krönert, A.E. Pohland (Associate Members); M.M. Abdel Kader, P. Czedik-Eysenberg, T. Kato (National Representatives); R. Bagnis, Doris Billek, J.W. Birks, M. Friesen, H. Guthenberg, E. Hopkin, D.L. Park, E. Radler de Aquino Neto, W. Saurer, J.O. Toth (Observers)

2. Membership

Dr. A.D. Campbell, Dr. J.W. Howard, Prof. D. Reymond and Dr. A.E. Wasserman have resigned their functions in the Commission. New Associate Members: Dr. M. Castegnaro, Dr. D.L. Park, Dr.A.E. Pohland and Dr. F. Reiners. The Commission elected Dr. P.L. Schuller as new Vice-Chairman and proposed Dr. A.D. Campbell for nomination as National Representative.

3. Project Status

Seven projects have been terminated either successfully after publication of the results or because it was not found relevant to investigate these topics any longer for various reasons. Many of the remaining projects are organised in two Working Groups (WG).

The WG "Mycotoxins" (Chairman Prof. Jemmali) distributes twice a year the "Mycotoxins Working Group Newsletter" for internal information. Specifications for mycotoxins analytical standards are now at the final stage and methods for aflatoxin in foods of animal origin and aflatoxin M_1 in dairy products have been completed and published in JAOAC. A paper on multi-mycotoxins analyses has been published in PAC. Collaborative studies on a HPLC-patulin procedure, on a HPLC procedure for aflatoxin in peanut butter and a method for ochratoxin A in kidneys are progressing. Further, the WG is preparing guidelines for the decontamination procedures of mycotoxins contaminated foodstuffs and a handbook for sampling plans for mycotoxin analysis. The WG is responsible for the arrangement of V. International IUPAC Symposium on Mycotoxins and Phycotoxins in Vienna/Austria, 1-3 September, 1982. The establishment of a Committee for the Coordination of International Mycotoxin Activities is at the planning stage. Dr. Pohland was elected as new Chairman of the WG because of Prof. Jemmali's appointment in Tunisia.

The WG on "Marine Biotoxins" (Chairman Prof. Krogh) has been renamed "Aquatic Biotoxins". It works on a collaborative study of a spectrofluorimetric procedure for paralytic shellfish poisons, but for the moment the activity is concentrated on an improvement of the method. The WG has also under consideration the possibilities for the determination of cyanophyte toxins and of ciguatoxin.

Besides the two WGs a series of projects dealing with inorganic and organic contaminants are under the responsibility of several project coordinators. Improved methods for the determination of fluorine, mercury, selenium and tin in food will be published. A collaborative study on a method to determine N-heterocyclic compounds in food has been completed, and a publication is on the way. The project will be followed by one on polyaromatic compounds (PAC). The project in the nitrosamine area will concentrate on the determination of total nitrosamines in food.

The project on residues in edible products from treated livestock is mainly concentrated on residues of sulfonamides in muscle and liver and methods of analysis for the determination of these compounds. In collaboration with Commission on Biotechnology guidelines for testing of single cell protein (SCP) destined as a component for human food is in preparation.

4. Next Meeting

The next meeting of the Commission on Food Chemistry will be held in Vienna, Austria from 30 August to 1 September, 1982.

VI.2 Commission on Biotechnology

(MEETINGS OF 27 - 29 AUGUST 1981)

Present: Chairman - H. Dellweg, FRG; Vice Chairman - C.L. Cooney, USA; Secretary - R.C.Righelato, UK; V.K. Eroshin, USSR; A. Fiechter, Switzerland; T.K. Ghose, India; J. Hollo, Hungary; F. Parisi, Italy; J. Takahashi, Japan; J.E. Zajic, USA; S. Fukui, Japan; O. Ilnicka-Olejniczak, Poland; M. Linko, Finland, M. Ringpfeil, GDR; H. Wutzel, Austria.

Membership Changes: C.L. Cooney (USA) and T.K. Ghose (India) were re-elected as titular members. A. Langlykke resigned as National Representative for the USA after many years valuable service. F. Parisi resigned after serving for 10 years but will continue to assist the Commission on project work.

Projects: The "List of Symbols with Units Recommended for use in Biotechnology", revised following IDCNS comments, is now ready for publication.

Good progress is being made on preparation for the 7th International Biotechnology Symposium to be held in New Delhi. The date has been set for 19th-24th February 1984 and the first circular will be distributed towards the end of 1981. The meeting will be held at a major convention centre and accommodation will be available in the international hotels. Two invitations, from France and Switzerland, have been received for the 8th International Biotechnology Symposium which will be held in 1988.

An exhaustive report on methods for measurement of cellulase activity has been prepared and will be used as the basis for "Proposals for Recommended Methods for the Measurement of Cellulase Activity" which will be published in 1982. A workshop will be held in 1983 to discuss the proposals and inter-laboratory comparisons, following which "Recommended Methods" will be published.

Some progress has been made on the project on Single Cell Protein Destined for use as Human Food with the preparation by a Japanese working party of methods for analysis of SCP derived from ethanol. It was agreed that the definition of quality guidelines for protein derived from ethanol should proceed. However, in the last two years several other international bodies have also started work on this subject. The Food Commission and Biotechnology Commission agreed to work with the other international bodies to redefine the goals for IUPAC's contribution.

The use of live microbes in agriculture was discussed as a new interest area and a project was initiated on Guidelines for the Assessment of Quality of Live Fungal Products as Pesticides.

The Commission adopted a resolution on its methods of working aimed at speeding up the execution of projects and improving communication between the Commission and biotechnologists in member countries.

Over his many years of working in the Division, Professor Suomalainen has provided valuable guidance to the Commission for which we would like to record our gratitude on his retirement from the Division.

The next meeting will be held in the USA in August or September 1982.

VI.3 Commission on Oils, Fats and Derivatives

(MEETINGS OF 26 - 28 AUGUST 1981)

1. Present

Members : C.PAQUOT (Chairman), A.HAUTFENNE (Secretary), T.ASAHARA, J.BEARE ROGERS, H.BRÜSCHWEILER, A.DIEFFENBACHER, D.FIRESTONE, P.HENDRIKSE, B.JACOBSBERG, E.KURUCZ, Ö.LEVIN, T.MØLLER, M.NAUDET, R.OHLSON, G.OSTERMANN, J.POKORNÝ, J.van der WEEL, A.VISAPÄÄ, H.VOS, H.WESSELS, K.WILLIAMS, J.P.WOLFF, G.ZWERENZ.

Observers : H.CHAVERON (O.I.C.C.), S.HAARSCHER (C.E.E.), E.HOPKIN (I.D.F.), R.MARCUSE (Lipidforum), M.PIKE (FOSFA), W.POCKLINGTON (Lab. of Government Chemist), V.ROUBAJLO (USSR), Y.TAKESHITA (Japan), K.WILLIAMS (BSI), R.ZWART (N.N.I.-ISO/TC 34/SC 10).

2. Chairman's Report

Firstly, the Chairman evoked the memory of colleagues who died this year, Mrs LEWKOWITSCH and FOSTER D. SNELL.
Then having exhausted his mandate, he struck the balance of the Commission activities and development during his Chairmanship.
Argentina, Brazil, Egypt, Finland, Romania, South 'Africa and Yugoslavia have now representatives and USSR an observer within the Commission.
International Organisations grow into the habit of delegating observers : ISO, EEC, Codex Alimentarius on Oils and Fats, OICC, COI, FOSFA, IDF.
The main activity of the Commission lies in the activities of its Working Groups and in the publication of methods adopted after circular analysis. Several W.G. have completed their task in preparing new methods of analysis and new working parties were created about topics frequently suggested by industry.
Publications in English, French and Bulgarian are entirely successful. Considering this evolution, the Chairman expressed his great surprise and disappointment in hearing the recent and unforeseen criticisms of the Union Chairman against the Commission. Hoping that they will be completely refuted by his successor, he wish a fruitful mandate to Dr. FIRESTONE and Prof. NAUDET respectively next Chairman and Vice-Chairman.

3. Membership

Prof. B.OŠTRIČ-MATIJAŠEVIČ, Prof. PAQUOT and Drs J. van der WEEL resigned their functions within the Commission.
The Commission approved the appointment of Dr. DIEFFENBACHER, Prof. FEDELI, Dr. POCKLINGTON, Dr. PRINS, Mrs VISAPÄÄ and Dr. ZWERENZ as Associate Members.
Since the Davos meeting (1979) were also approved the nomination as National Representatives : Dr. BAZAN (Argentina), Mr. CARR (South 'Africa), Prof. GAD (Egypt), Prof. LINKO (Finland), Mrs Mc CARTHY (Ireland), Dr. OSTERMANN (Fed. Rep. Germ.), Miss PERIN (Turkey), Dr. STOICA (Romania).

4. Working Groups

The hereunder mentioned Working Groups pursue their activities (in parentheses : name of the relevant Chairman).

WG 4 Determination of chlorinated pesticides in oils, fats and margarines (specially in woolwax) (G. ZWERENZ)
WG 8 Identification and determination of emulsifiers (derived from fatty materials) in oils and fats (H. BRÜSCHWEILER)
WG 9 Publication of methods (A.HAUTFENNE)
WG 13 Determination of undesirable plastic - based contaminants other than polyethylene, in oils and fats (Ö. LEVIN)
WG 3/78 Determination of polycyclic aromatic hydrocarbons in fats (D. FIRESTONE)
WG 1/79 Determination of erythrodiol in grape seed oil (J. GRACIAN TOUS)
WG 2/79 Determination of total sterols in oils (M. NAUDET)
WG 3/79 Determination of mineral oil residues in oils and fats Part II. Quantitative determination (H. VOS)

WG 1/80 Transfer of fats and oils methods of analysis to phospholipids analysis (R. OHLSON)
WG 2/80 Determination of total phospholipids and insoluble impurities in lecithins (O. LEVIN)
WG 3/80 Qualitative and quantitative determination of phospholipids and determination of phosphorus content (J. BEARE ROGERS)

Two new Working Group were created :

WG 1/81 Determination of solvent residues in cakes (J.P. WOLFF)
WG 2/81 Determination of glyceride composition of fats and oils by GLC (W. POCKLINGTON)

5. Publications

Since the Davos meeting (1979) and the publication of the 6th Edition of the Standard Methods for the Analysis of Fats and Oils, the following methods were published in PAC as 1st Supplement.

Part 1 : methods

1.123. Determination of oil content (low resolution nuclear magnetic resonance method)
2.503. Determination of the "oxidized acids" (thin layer chromatographic method)
2.641. Determination of organochlorine pesticides
2.801. Determination of total fat in margarines

PAC (1979) Vol.51, pp.2503-2525.

Part 2 : methods

3.111. Determination of alkalinity or acidity
3.131. Determination of water content (Karl FISCHER method)
3.135. Determination of ash content
3.136. Determination of arsenic content (photometric method employing silver diethylditiocarbamate)
3.137. Calculation of matter (organic) non-glycerol. - MONG

PAC (1980) Vol.52, pp.1939-1954.

Part 3 : methods

2.209. Determination of polyunsaturated fatty acids with a cis,cis 1,4-pentadienoic structure
2.606. Determination of polyethylene type polymers

PAC (1981) Vol.53, pp.783-794.

6. Date and place of the next meeting

7-10 September 1982 - ZEIST (The Netherlands).

VI.4 Commission on Atmospheric Environment

(MEETINGS OF 26 - 29 AUGUST 1981)

Present: Commission Members - Mr. S.G. Luxon, Chairman, Dr. A.J. Collings, Secretary, Mrs. M. Fugas, Mr. K. Leichnitz, Mr. K. Birrett, Prof. M. Benarie.

Observers - Dr. G. Ebbon, Concawe, Dr. G.S. Harrison, South Africa, Dr. S.M. Kubba, Iraqi Chemical Societies, Dr. M. Mohinder Singh, Federation of Asian Chemical Societies, Dr. A. Berlin, EEC.

PROF. ZOLLINGER'S PROPOSALS

Concern was expressed by the Commission that the basis for Prof. Zollinger's review was just abbreviated titles and that no attempt had been made to discuss matters with Commission members. The members endorsed the Applied Chemistry Division's view that the work of the Commission should continue.

REVIEW OF PROJECTS

The projects on 'standards for detector tubes' and 'sampling strategy in the Work Place' were completed and will be published in PAC. A draft of the paper on 'sampling strategy in the general environment' was discussed. A statement was issued drawing attention to the limitation of the current counting method for the measurement of asbestos in air and making recommendations to ensure that links will be present between existing and any new methods. Methods for the measurement of vinyl chloride monomer and benzene in the Work Place were discussed in view of ISO activities. The Commission would continue to work with ISO and wait six months for the results of their collaborative studies before finalising the reports. It was noted that sampling strategy was excluded for ISO methods. Considerable interest was expressed in the proposed Work Shop/Symposium on 'Standard Atmospheres' for calibration of methods and inhalation toxicology. Mr. Leichnitz, Prof. Benarie and Dr. Collings to liaise and progress the programme with a view to completion in 1983. The project on nitrosamines in air dropped. The proposed symposium on 'Environment Impact of Coal Conversion Technology' was well supported by those present and it was tentatively agreed to hold this meeting in the Netherlands in 1984/5. It was noted, with regret, that no progress had been made in the area of Ozone in the atmosphere. It was agreed that the project should be redefined and a new member sought to progress matters. A method for the measurement of nickel in air was distributed to members of the Commission and the Subcommittee on nickel. The arrangements for the Symposium on 'The Safe Use of Solvents', Brighton, England, 23-27 March 1982 were progressing smoothly.

OTHER TOPICS

The Commission discussed the current status of methods for measuring iso cyanates in air and the use of ethylene as a growth promoter in agriculture. It was recognised that the proposed use of ethylene in rubber plantations could result in massive human exposure and that consideration should be given to a new project on simple methods of measuring ethylene in air, suitable for use in the countries concerned.

LIAISON WITH INTERNATIONAL AGENCIES

The Commission had made positive contributions to the work of ISO, OIML and ECE and liaison continued with NtP and WHO. It was hoped that the proposed programme on 'Standard Atmospheres' would be jointly sponsored by the Commission and the EEC.

LIAISON WITH COMPANY ASSOCIATES

It was agreed that since the Commission's programme was of such direct interest, Company Associates should be encouraged to participate in the work of the Commission wherever possible

MEMBERSHIP

Mr. Leichnitz was elected Chairman and Dr. Collings, Secretary for the next two years.

NEXT MEETING

To be at Brighton (1982) funded independently of IUPAC.

A.J. Collings
Secretary

VI.5 Commission on Pesticide Chemistry

(MEETINGS OF 25 - 30 AUGUST 1981)

1. Present

P.C. Kearney (Chairman), J.A.R. Bates (Vice-Chairman), R. Greenhalgh (Secretary), V. Batora, D.G. Crosby, N. Drescher, S. Gorbach, M.A. Klisenko (titular members); N. Aharonson, J. Desmoras, H.O. Esser, R. Hemingway, W. Klein, T.R. Roberts, G.G. Still, H.P. Thier, S. Lj. Vitorovic, J.W. Vonk (Associates); H.P. Boyle and R. Bergamasca (Observers).

2. Membership

All memberships were renewed until 1983, with the exceptions of V. Batora and D.G. Crosby whose tenures have expired. The membership of J. Miyamoto, which also terminated this year, was extended until 1983, due to his commitment in organizing the Kyoto Congress.

3. Publications

Five commission reports have been published since the last meeting. They are, #11, Definition of persistence, Pure Appl. Chem. 52: 2563-2566 (1980); #12, A review of methods for the residue analysis of the systemic fungicides benomyl, carbendazim, thiophanate-methyl and thiabendazole, Pure & Appl. Chem. 52: 2567-2590 (1980); #13, Development and evaluation of simplified approaches to residue analysis, Pure Appl. Chem 53: 1039-1049 (1981); #14, Environmental chemistry of pentachlorophenol, Pure Appl. Chem 53: 1051-1080 (1981) and #15, The chemistry, metabolism and residue analysis of synthetic pyrethroids, Pure Appl. Chem. 53: 1967-2022 (1981).

4. Reports

Three reports, (1) Recommended approaches to the production and interpretation of pesticide residue data (project 4/81), (2) Environmental chemistry of organotin pesticides (9/81) and (3) A definition of non-extractable residues in plants and soils (7/81) were finalized and their recommendations accepted by the Commission.

5. Projects 82

(1) Fifth International Congress - Miyamoto, Kearney, Drescher and Greenhalgh; (2) Critical evaluation of model ecosystems - Klein, Roberts, Miyamoto and Greenhalgh; (3) Confirmatory Techniques - Greve and Greenhalgh; (4) Optimum use of pesticide residue data - Bates, Taylor, Thier, Aharonson, Vitorovic, Klisenko, Greve, Gorbach and Ambrus; (5) JMPR reports - all members; (6) CCPR reports - all members; (7) Non-extractable residues in plants and soils - Still, Desmoras, Drescher, Klein, Aharonson, Esser and Roberts; (8) Evaluation of environmental behaviour of pesticides - Esser, Hemingway, Crosby, Bates, Vonk and Still; (9) Improved cost/effective approaches to residue analysis - Hemingway, Gorbach, Aharonson, Greve, Thier, Ambrus and Roberts; (10) Impurities in organophosphorus pesticide technical products and formulations - Greenhalgh and Batora; (11) Appropriate uses of labelled compounds in testing and study of their fate in the environment - Klein and Vonk (exploratory).

6. Assignments

Draft reports for projects # 2/82, 3/82, 4/82, 7/82, 8/82, 9/82 and 10/82 will be prepared for discussion and Commission acceptance at the next meeting. The report on immune assay (14E/81) will be combined with 9/82 for publication, and the report on project 10/81 will be held for inclusion in Guideline II. The chairman will forward the draft definition on non-extractable residues in plants and soils. (7/81) to FAO/IAEA, Vienna for consideration at the Costa Rica meeting Nov./Dec. 1981. The latest CCPR report and JMPR requirements will be sent to all members by the vice-chairman.

7. Future Meeting

The next meeting of the Commission will be held in Hakone, Japan, August 22-28, prior to the IUPAC Congress on Pesticide Chemistry, August 29 - September 4 in Kyoto, Japan.

R. Greenhalgh
Secretary

VI.6 Commission on Water Quality

(MEETINGS OF 26 - 27 AUGUST 1981)

PRESENT:	Dr. S. Freyschuss	(SF)	Sweden	(a)
	Dr. J. Goldshmid	(JG)	Israel	(t)
	Dr. E.I. Hamilton	(EIH)	United Kingdom	(t)
(Secr.)	Mrs V.B. Jensen	(VBJ)	Denmark	(t)
	Dr. J. Koller	(JK)	Czechoslovakia	(t)
	Mr. J.S. Lemlin	(JSL)	United Kingdom	(a)
(Chairman)	Mr. P. Schjødtz Hansen	(PSH)	Denmark	(t)
	Mrs N. Strupler	(NS)	France	(o)
	Dr. K. Trobisch	(KT)	Fed. Rep. of Germany	(t)

(t) = Titular Member; (a) = Associate Member; (o) = Observer

1. The Commission took note of the Minutes of the meeting in Copenhagen, 2-3 September, 1980, and the Agenda.

2. Membership

All above-mentioned members, Prof. W. Wesley Eckenfelder, Jr., U.S.A. (a), and Mr. B. Göransson, Sweden (a) will continue their membership with one alteration, viz. KT will continue as an Associate Member. Mr R. Savisaari, Finland (a); Prof. R. Vilagines, France (a); and Prof. R. Wagner, Fed. Rep. of Germany (t) resigned. No Vice-Chairman was elected. NS was suggested as new Associate Member, and Prof. H. Velner, U.S.S.R. as new Titular Member.

3. Review of Current Projects

a. Joint IAWPR/IUPAC Working Group on Notation in Biological Wastewater Treatment; JK is a member of the group.

b. International Workshop on Approaches to the Characterization of Aqueous Effluents from the Oil Refining Industry (SWQ/CONCAWE); JSL is Chairman.

c. International Conference on Coal Fired Power Plants and the Aquatic Environment (IAWPR /IUPAC/NORDFORSK); PSH is Chairman.

d. 1986 CHEMRAWN Conference; KT is appointed as contact person to CHEMRAWN.

The Commission was informed about the progress of current projects, and further activities were discussed.

Re a. Comments, if any, should be sent to JK before October 1, 1981.

Re b. Under CONCAWE-sponsorship the workshop is to be held at the University of Leuven on August 28-30, 1981. Rapporteus will summarize the outcome of the workshop with particular respect to the identification of conclusions on the Workshop topic and recommendation of areas for further study. The report will be published in the Journal of Pure and Applied Chemistry. Furhter CONCAWE/IUPAC-activities are being considered. (JSL).

Re c. PSH will continue to proceed with the preparations of the Conference on behalf of the Commmission and, within two months, send out information about the final preparations to all members of the Commission.

Members of the Commission shall, in a very near future, suggest persons as lecturers.

In order to select papers a complete list of the titles will be sent to members of the Commission, and papers selected will be printed by Pergamon Press at a favourable price. At present, there seems to be no need for extra meetings in relation to preparation of the Conference. Abstracts will be passed on to Programme Committee Members.

Re d. PSH will send out copies of letters and papers of interest concerning CHEMRAWN to EIH and KT respectively.

4. New Projects

Four new projects were started.

e. Preparation of a State-of-the-Art Paper on Fate of Pollutants in the Unsaturated Zone. Project Coordinator: JG assisted by EIH. and through VBJ, employee of the VKI, Water Quality Institute, DK.

f. Treatment of Non-biodegradable Material in Wastewater from Chemical Industries. Project Coordinator: Prof. W. Wesley Eckenfelder, Jr. (assisted by SF, JSL, PSH, and KT) - PSH will inform W. Wesley Eckenfelder.

(to be contd.)

g. Evaluation on Processes in which Standards (Limits for Pollutants) are Set up in Different Countries.
Project Coordinator: JK. Members including National Representatives shall prepare a short memorandum about the standards in their respective countries and send them to JK.

h. Rainwater Analysis.
Project Coordinator: EIH. PSH will send copies of letters from Dr. H. Egan, Dept. of Industry, Laboratory of the Government Chemist, Cornwall House, Stamford Street, GB-London SE1 9NQ concerning the above project to EIH. EIH will take care of further activities.

5. Co-operation with Other Organizations than Those Mentioned Earlier

COWAR	Contact person: PSH
ISO	Contact person: VBJ
SCOR	Contact person: EIH

Contacts to the organizations mentioned should be retained as hitherto.

6. National Representatives

National Representatives are asked to send to the CWQ a brief personal history. The purpose of this is to have a possibility of engaging them in coming activities.

7. Next Meeting

Next meeting will be held at

Esso Research Centre
Esso Petroleum Co. Ltd.
GB-Abingdon, Oxfordsh. OX13 6AF

Arrival, Tuesday 11. May, 1982 (afternoon)

Meeting on 12. May, 1982

Departure on 12. May, 1982 (evening)

Vibeke B. Jensen
Secretary of CWQ

VBJ/VS
September 8, 1981

VII. CLINICAL CHEMISTRY DIVISION

Commission on Automation
Commission on Quantities and Units
Commission on Teaching
Commission on Toxicology

Clinical Chemistry Division Committee

(MEETINGS OF 25 - 29 AUGUST 1981)

1) Section Membership - F. William Sunderman Jr (USA) and S.S. Brown (UK) continue as Titular Members until 1983. A. Kallner (S), M. Mikac-Devic (YU), N. Montalbetti (I), K. Okuda (J), N. Titov (USSR), D.J. Vonderschmitt (CH) were elected Titular Members (1981-85). L.F. Bertello (RA), P.A. Bonini (I), P. Desjardins (CND), G. Férard (F), K. Kasprzak (PL), D.W. Scheuch (DDR), D. Stamm (FRG), R. Vihko (SF) were elected Coopted Members (1981-83). F. William Sunderman was elected President, S.S. Brown Vice President (President-Elect) and N. Montalbetti Secretary.
R. Gräsbeck (SF) automatically became Past-President.

2) Subcommittee on Clinical Chemical Standards - D.B. Tonks' recommendation that the Elected Members of the new Division Committee should constitute the Subcommittee was approved, and S.S. Brown was appointed Chairman for his term of office as Vice President of the Division.

3) Commission on Automation - The Division's recommendation that the new name of the Commission should be "Commission on Automation and Clinical Chemical Techniques" was approved.
The document "Nomenclature for Automated and Mechanized Analysis" was received for processing as a formal recommendation.
The document "Characteristics and Attributes of Instruments for Automated Analysis in Clinical Chemistry" was approved for publication as a provisional recommendation.
C.A. Burtis (USA) and R. Haeckel (FRG) were appointed Titular Members (1981-85), and D.S. Young (USA), T.P. Whitehead (UK) and J. Büttner (FRG) Associate Members (1981-83).

4) Commission on Quantities and Units in Clinical Chemistry - The document "Systems, Quantities and Properties in Clinical Chemistry: Concept and Terms based on Set Theory" (stage 1, draft 1), which had already been reviewed by the Division Committee, was approved for publication as an IUPAC document.
D.B. Visser (NL) and J.C. Rigg (NL) were appointed Titular Members (1981-85), and R. Dybkaer (DK) and R. Zender (CH) Associate Members (1981-85).

5) Commission on Teaching of Clinical Chemistry - The document "Provisional Recommendation (1979) on a Scheme for a Two Year Postgraduate Course in Clinical Chemistry" already approved by the Committee was submitted to IFCC for review prior to publication.
M.K. Schwartz (USA) was appointed Chairman (1981-85); H.G.J. Worth (UK) Secretary (1981-85); G.G. Fraser (AUS) Titular Member (1981-85); J.A. Correa (BR) and N. de Cediel (CO) Associate Members (1981-85).

6) Commission on Toxicology - The Division agreed with the termination of the Subcommittee on Cholinesterase and supported the formation of a Subcommittee on Selenium.
S.S. Brown (UK) was appointed Commission Chairman (1981-85); J. Savory (USA), M. Stoeppler (FRG), M. Mikac-Devic (YU) and D.B. Tonks (CND) continue as Titular Members (1981-85).
K.S. Kasprzak (PL), S. Nomoto (J), Y. Thomassen (NOR) K. Kuehn (CH) and E. Nieboer (CND) were appointed Associate Members (1981-85).

7) The next meeting of the Division will be held in Lynby, Denmark in August 1983.

VII.1 Commission on Automation and Clinical Chemistry Techniques

(MEETINGS OF 26 - 28 AUGUST 1981)

1 Projects:

a) The document on "Characteristics and Attributes of Instruments intended for Automated Analysis in Clinical Chemistry", published provisionally in IUPAC Inf. Bull. 3 (1978) 233-240 was reviewed incorporating several comments received and submitted for final approval.

b) The draft document "Nomenclature for Automated Analysis in Clinical Chemistry" was jointly reviewed by the Commissions V.3 and VII.1 and it was agreed to forward the document with minor changes through administrative channels for publication.

c) The Commissions V.3 and VII.1 agreed to work jointly on two new documents, provisionally entitled

- "Nomenclature of bioanalytical methods of analysis" to be concerned with both in vitro and in vivo analysis of biologically active materials, and with D.S. Young as co-ordinator for VII.1.

- "Electronic Data Processing and Microprocessors in Analytical and Clinical Chemistry", with J. Bierens de Haan as the co-ordinator from Commission VII.1. A draft document prepared by Commission V.3 entitled "Nomenclature of Information, Storage and Retrieval" will serve as a base for the joint project.

2 The ISO/IEC/OIML/BIPM draft document on "International Vocabulary of Basic and General Terms in Metrology" was reviewed by the Commission and suggested modifications will be submitted to the Clinical Chemistry Division for inclusion as part of the overall IUPAC response to the proposal.

3 The role of the Commission within IUPAC was discussed, and it was agreed to propose broadening its operating charter as being, "To define terms relating to automated and non-automated analytical procedures in clinical chemistry. The existing terminology of IUPAC and other international organisations will be used where applicable. A particular effort will be made to resolve any differences and inadequacies in current terminology. New terms will be developed if needed." This charter will allow the Commission to establish closer collaboration with Commissions within IUPAC especially V.3 and other international organisations, especially the IFCC Expert Panel on Instrumentation. The Commission also proposed modification of its title to relate better to its new charter. (The Division Committee has agreed the new title to be the "Commission on Automation and Clinical Chemical Techniques").

4 Present: M. Hjelm (Chairman), J. Bierens de Haan, D.S. Young. Attending for part of the meeting P.G. Broughton (Clinical Chemistry Division Committee), N. Montalberti (Acting National Representative).

5 Membership: In 1981-1983 M. Hjelm and J. Bierens de Haan will continue in their present capacity. C. Burtis, U.S.A. and R. Haeckel, Germany, will be recommended to be appointed as new titular members. J. Buttner, D.S. Young and T.P. Whitehead will serve as Associate Members.

6 The next meeting, jointly with Commission V.3, will take place in the United States, June 1982.

VII.2 Commission on Quantities and Units in Clinical Chemistry

(MEETINGS OF 26 - 28 AUGUST 1981)

Present: H.P. Lehmann (Chairman), C. Onkelinx, J.C. Rigg, O. Siggaard-Andersen, B.F. Visser (Titular Members); L.F. Bertello (Associate Member); P.D. Griffiths (National Representative)

1. Provisional minutes of EPQU/CQUCC Meeting in Maastrich, The Netherlands, March 9-11, 1981 were approved.

2. Membership: The following actions were recommended:

   B.F. Visser - Titular Member 1981-85; J.C. Rigg - Titular Member 1981-83
   R. Dybkaer - Associate Member 1981-85; R. Zender - Associate Member 1981-85

3. Reports on Documents:

   a. Physicochemical Quantities and Units in Clinical Chemistry with Special Emphasis on Activities and Activity Coefficients (joint document with IFCC/EPpH): document published in Clin. Chim. Acta (December 1980) J. Clin. Chem. Clin. Biochem. (November 1980) and PAC (August 1981). Comment period is still open (to April 1982).

   b. QUCC: Molecular and Atomic Emission and Absorption Spectroscopy in Physico-Chemical Plasmas: revised document in final preparation prior to submission to IUPAC-Clinical Chemistry Division (CCD) and IFCC - Scientific Committee (SC) with a view to publication as a joint IUPAC-IFCC Provisional Recommendation.

   c. Systems, Quantities and Properties in Clinical Chemistry - Concepts and Terms Based on Set Theory: document approved by IUPAC-CCD (1981-08-25), and will be submitted to IUPAC/IDCNS with a view to publication as a IUPAC Provisional Recommendation.

   d. QUCC - Optical Spectroscopy I: Theoretical Outline and General Quantities, Recommendation 1978: Davos 1979 revision was reviewed. The document will be revised jointly with Commission I.5 and submitted to the IUPAC Physical Chemistry Division and IUPAC-CCD as a joint Commission I.5 and VII.2 Recommendation.

   e. Specification of Radiation: stage 1, draft 1 document reviewed. Will be revised and a list of quantities in optical spectroscopy and an index will be added. The document will be submitted to IFCC-SC with a view to publication as an IFCC Provisional Recommendation.

   f. Nomenclature of Derived Quantities: stage 1, draft 7 was revised. A final revised document will be prepared and submitted to IUPAC-CCD and IFCC-SC with a view to publication as a joint IUPAC-IFCC Provisional Recommendation.

   g. Provisional Recommendation on the Unit "One": stage 1, draft 2 document reviewed. A further revision of the document will be made and the draft 3 document will be submitted to IUPAC/CCD, IFCC/SC and to the International Committee for Standardization in Hematology (ICSH) for review and comment, with a view to publication as a joint IUPAC-IFCC Provisional Recommendation.

   h. Quantities Related to Change in Properties with Time: topic discussed briefly. Work has been started on a revision of the stage 1 (1975) draft document. A new stage 1, draft 1 document will be prepared for review at the next meeting.

4. IUB Proposal on the Dalton: CQUCC's position opposing the introduction of the dalton as the unit to express molar (atomic and molecular) masses was reaffirmed. CQUCC feels that the unit kg/mol is adequate to express molar mass. This view will be forwarded to IDCNS.

5. A brief joint meeting was held with Commission V.4 to discuss documents of mutual interest:

   a. item 3 b, and 3 d above

   b. Commission V.4 draft documents:

      i. Analytical Optical Molecular Absorption Spectroscopy: UV and Visible
      ii. Instrumentation for Dispersion and Isolation of Optical Spectra

6. Future Meetings: EPQU(IFCC) Copenhagen, Denmark May 1982
   CQUCC(IUPAC) Bruxelles, Belgium November 8-10, 1982

VII.3 Commission on Teaching of Clinical Chemistry

(MEETINGS OF 26 - 28 AUGUST 1981)

H G J WORTH

DEPARTMENT OF CLINICAL CHEMISTRY
KING'S MILL HOSPITAL
SUTTON-IN-ASHFIELD
NOTTINGHAMSHIRE NG17 4JL UNITED KINGDOM

Those Present:

Professor D H Curnow (Chairman)	Dr O Zinder
Dr C J Porter (Secretary)	Professor L Josefsson (Representing IUB)
Dr M K Schwartz	Professor N Montalbetti (Present for part of meeting)
Dr H G J Worth	Professor T Kanno (Present for part of meeting)

Progress in current projects since the last meeting was reviewed.

M.Sc Course: Comments received in response to a provisional publication have been incorporated into a draft for final publication. This project should then be considered complete.

Teaching Programmes in Developing Countries: South American countries working in co-operation have prepared a training programme based on the Commission's M.Sc. recommendations. Egypt is expected to set up a similar programme shortly. Packages continue to be prepared for the Self Instruction Material (SIM) programme, including a series on reagent preparation commissioned by WHO. These should be ready in a draft form by January 1982.

Teaching Programmes for Technical and Scientific Personnel: Wide and conflicting critisms of a draft document has resulted in the Commission defining its objectives more closely. It is now hoped that a further draft will lead to a provisional publication in 1982.

Certification, Licensure and Accreditation: A document is in preparation and should be ready during 1982.

Reading List: This is available in English based on material from the American, Australian and British Associations.

IFCC Visiting Lectureship: This will be sponsored through monies made available to the International Federation of Clinical Chemistry. Proposals have been made for the mechanism of selection of the lecturer, the programme and the host country. It is hoped this project may be implemented in 1982.

A number of other matters were discussed the most significant of which were as follows.

Supplements to the Monograph: The monograph "Education and Training in Clinical Chemistry" requires up-dating. This work is to start shortly. New contributions would also be welcomed.

Joint Activities with IFCC Expert Panels: The Commission is seeking a way to collaborate with an Expert Panel on an aspect of their work which is primarily educational. This is being discussed with the Expert Panel on Drug Effects in Clinical Chemistry. Progress will be reviewed during 1982.

Advances in Clinical Chemistry: The Commission has agreed that its members should collaborate in producing an article for this journal on education and teaching in clinical chemistry.

Venue and Date of Next Meeting: The Commission has been invited, and has accepted, to hold its next meeting in Singapore in September 1982 at the 2nd Asian/Pacific Congress of Clinical Biochemistry.

VII.4 Commission on Toxicology

(MEETING OF 26 - 27 AUGUST 1981 AND JOINT MEETINGS WITH COMMISSIONS OF ATMOSPHERIC ENVIRONMENT AND MICROCHEMISTRY AUGUST 28 1981)

1. Present
F. William Sunderman, Jr. (Chairman), Stanley S. Brown (Vice-Chairman), John Savory (Secretary), Markus Stoeppler, David B. Tonks and Mirna Mikac-Devic with Richard Ratcliffe as an invited observer.

2. Sub-committee Activities.
a. Nickel (Prof. Sunderman). The Proceedings of the Second International Conference on Nickel Toxicology were published within 10 weeks of the Meeting. A reference method for Nickel has been published in Pure and Applied Chemistry 53, 773, 1981.

b. Cadmium (Dr. Stoeppler). An interlaboratory survey has been completed and the results will be included in a manuscript for publication in Pure and Applied Chemistry. A candidate reference method was recommended and is identical to that published by Brandt and Stoeppler in Zeitschr. Anal. Chem. Future projects will include reference methods for urine and tissue analysis and also urine β2-microglobulin. A meeting of the Sub-committee is planned in the Winter of 1981-82.

c. Cholinesterase (Dr. Brown). The review on Plasma Cholinesterases is in press (Adv. Clin. Chem.). It was proposed that the Sub-committee be terminated since all projects have been completed.

d. Aluminium (Prof. Savory). A review on the Analytical Biochemistry of Aluminium is being prepared. An inter-laboratory survey is planned for 1982.

e. Selenium (Prof. Sunderman). A Sub-committee for Selenium was proposed and it was agreed to invite Dr. Thomassen as the chairman.

3. The Symposium on Organ-directed Toxicity was held in Barcelona 4-7 March 1981. The meeting was a scientific success and the Proceedings have been published with Drs. Brown and Davies as co-editors.

4. The Second International Conference on Clinical Chemistry and Chemical Toxicology of Metals is being planned for July 1983 and will be held in Montreal, Canada. The Proceedings will be edited by Drs. Brown and Savory.

5. The Third International Symposium on Nickel Toxicology will be held in Paris, September 1984. The Proceedings will be edited by Prof. Sunderman and Dr. Brown.

6. A joint meeting was held with the IUPAC Commission of Atmospheric Environment on August 28. A reference method for measuring nickel in air was reviewed. Atmospheric concentration limits of aluminium, chromium, selenium, and organic solvents were discussed.

7. A joint meeting was held with the IUPAC Commission on Microchemistry on August 28. Areas of mutual interest were discussed and included the development of reference methods for selenium, mercury, manganese, nickel, aluminium, beryllium and molybdenum.

8. The next meetings of the Commission on Toxicology are scheduled provisionally for Dublin, Eire June 8-10, 1982; Lyngby, Denmark, August 1983 and Paris, France, June 1984.

Subcommittee on Environmental and Occupational Toxicology of Nickel

(MEETINGS OF AUGUST 28 1981)

ORGANIZATIONAL MATTERS

Sixteen members of the Nickel Subcommittee attended the Leuven meeting, which was chaired by Dr. F. W. Sunderman Jr. The meeting began with a silent period in tribute to the memory of Dr. Richard C. Barton, who died since the last meeting of the Nickel Subcommittee.

PUBLICATIONS

The proceedings of the Second IUPAC Conference on Nickel Toxicology (Swansea, Wales, September 1980) have been published by Academic Press as a book entitled "Nickel Toxicology" (S.S. Brown and F.W. Sunderman Jr., Eds). The IUPAC Reference Method on Analysis of Nickel in Serum and Urine has been published in Pure and Applied Chemistry (53:773-781, 1981). A manuscript on "Interlaboratory Evaluations of Nickel and Cadmium Analyses in Body Fluids (F.W. Sunderman Jr., S.S. Brown, M. Stoeppler, and D.B. Tonks), that was prepared for the IUPAC Conference on Harmonization of Collaborative Analytical Studies (Helsinki, August 1981), was reviewed and approved by the Nickel Subcommittee.

CONFERENCES AND SYMPOSIA

The third IUPAC Conference on Nickel Toxicology will be held in Paris in 1984, (provisional dates - June 12-14, 1984). The host for the Conference is Societe Metallurgique Le Nickel. In organization and scientific program, the Paris Conference will be similar to the earlier conferences in Kristiansand, Norway, (1978) and Swansea, Wales, (1980).

PROJECTS

The Nickel Subcommittee reviewed progress on the five projects that are underway: (a) development of a reference method for analysis of nickel in whole blood by electrothermal atomic absorption spectrophotometry (F.W. Sunderman Jr., coordinator), (b) cooperative evaluation of reference matrix materials for nickel analysis in body fluids (M. Stoeppler and S.S. Brown, coordinators), (c) collaborative interlaboratory surveys of nickel analyses in body fluids to monitor occupational exposures to toxic nickel compounds (S.S. Brown, coordinator), (d) development of recommendations on collection, storage, and shipping of body fluids for nickel analysis (E. Nieboer, coordinator), and (e) drafting a document on autoradiographic detection of radiolabelled nickel in biological materials (A. Oskarsson, coordinator). All of these projects are on schedule, and should be completed by the target dates specified in the 1981 IUPAC Roster of Projects. No new projects were initiated.

RELATIONS WITH OTHER BODIES

The Nickel Subcommittee held a joint meeting with the Commission on Atmospheric Environment, and discussed a procedure drafted by K. Birett on analysis of nickel in atmospheric samples. Members of the Nickel Subcommittee agreed to evaluate this procedure in their laboratories. The Nickel Subcommittee also held a joint meeting with the Commission on Microchemical Analysis, which is drafting a general protocol for measurement of nickel in biological materials by atomic absorption spectrophotometry. The Nickel Subcommittee agreed to assist and support this endeavor.

FUTURE MEETINGS

The Nickel Subcommittee plans meetings at the following provisional locations and dates: (a) Dublin, Ireland, June 1982; (b) Montreal, Canada, July 1983, (c) Paris, France, June 1984.

F. William Sunderman Jr.
Chairman

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